

Country	Ethnicity	LM	n	Sex	Method	Age	Study population	Kilde
Algeria	Mozabite	0.61		60 Not specified	Genotyping	Not specified	DNA samples. Selection criteria not further specified	Bersaglieri, 04 (with adaptations in Ita
Angola*	Mixed	0.94		342 Not specified	Genotyping	Not specified		
Angola	Kuvale	0.88		54 Not specified	Genotyping	Not specified	Individuals were grouped according to self-identified ethnicity, and only samples from unrelated individuals were included in the study	Coelho, 09
Angola	Nyaneka-Nkhumbi	0.94		153 Not specified	Genotyping	Not specified	Individuals were grouped according to self-identified ethnicity, and only samples from unrelated individuals were included in the study	Coelho, 09
Angola	Ovimbundu	0.98		96 Not specified	Genotyping	Not specified	Individuals were grouped according to self-identified ethnicity, and only samples from unrelated individuals were included in the study	Coelho, 09
Angola	San	0.9		20 Not specified	Genotyping	Not specified	Not specified	Breton, 2014. Lactase
Angola	San (Khoe speaking) in Angola, Botswana and Namibia	0.95		19 Not specified	Genotyping	Not specified	Not specified	Breton, 2014. Lactase
Australia*	Mixed	0.436		116 40M,75F	HBT			
Australia	Caucasians	0.18		71 20M,51F (converted)	HBT (def. 3)	Median 34 (29-46)	Healthy volunteers (control subjects)	Barrett, 2009. Comparison
Australia	Aboriginal adults (around Derby in Western Australia)	0.84		20M,24F (one missing from data)	HBT (def. 1)	Mean 41 (15-75)	Subjects were drawn from the full-blood adult Aboriginal population living in and around Derby, Western Australia	Brand, 1983. Lactose
Austria*	Mixed	0.218		830 497M,333F	Genotyping, HBT, LTT			
Austria	Adolescent Austrians	0.201		528 258M,270F	HBT (def.1)	Mean 22.1 (16-72)	Healthy volunteers (students and hospital workers)	Rosenkranz, 82. Distribution
Austria	Not specified	0.2		30 0M,30F	HBT (def. 1)	Mean 43.6 (16-60)	Healthy volunteers (outpatients, medical health checkup)	Ledochowski, 98. Lactose
Austria	Not specified	0.121		33 0 M, 33 F	LTT (def. 1)	Mean 56 (33-67)	Presumably healthy women (controls).	Finkenstedt, 86. Lactose.
Austria	Caucasian men (ethnicity not specified)	0.27		239 239M,0F	Genotyping	Mean 61.9 ± 9 (50-85)	Population-based study and individuals attending an endocrinology outpatient clinic. Apparently healthy.	Gugatschka, 2007. Calcium
Belgium	Not specified	0.15		1051 313 M, 738 F	HBT (def. 1)	Mean 36.2	Randomly selected individuals.	Houben, 15. Additional
Botswana	San (Khoe speaking)	0.85		20 Not specified	Genotyping	Not specified	Not specified	Breton, 2014. Lactase
Brazil*	Mixed	0.602		2808 N/A	Genotyping			
Brazil	Not specified	0.591		501 Not specified	Genotyping	Not specified	Randomly selected healthy volunteers. Selected randomly among those who came from several city health centers for free routine	De Campos, 2016. Hypolactasia.
Brazil	Individuals in Porto Alegre (European ancestry)	0.486		337 Not specified	Genotyping	Not specified	blood determinations. Selected randomly among those who came from several city health centers for free routine	Friedrich, 2012. Several
Brazil	Individuals in Porto Alegre (African ancestry)	0.681		182 Not specified	Genotyping	Not specified	blood determinations.	Friedrich, 2012. Several
Brazil	Individuals in Belem	0.69		200 Not specified	Genotyping	Not specified	Healthy adolescents	Friedrich, 2012. Several
Brazil	Individuals in Recife	0.634		262 Not specified	Genotyping	Not specified	Not clearly specified	Friedrich, 2012. Several

Brazil	4 groups of Amerindians (Guarani-Kaiowá, Guarani-Nandeva, Kaingang, Xavante)	0.946	316	Not specified	Genotyping	Not specified	Not clearly specified	Friedrich, 2012. Stability
Brazil	Euro-Brazilians from South Brazil	0.445	292	142M,150F	Genotyping	18-64	Blood donors	Boschmann, 2016. The frequency
Brazil	Mennonites from South Brazil	0.12	151	73M,78F	Genotyping	18-89	Not specified	Boschmann, 2016. The frequency
Brazil	White people	0.566	399	27.7% men (entire study)	Genotyping	42.1 ± 16 (entire study)	Randomly selected asymptomatic and dyspeptic individuals (volunteers)	Mattar, 09. Frequency
Brazil	Brown people	0.569	65	27.7% men (entire study)	Genotyping	42.1 ± 16 (entire study)	Randomly selected asymptomatic and dyspeptic individuals (volunteers)	Mattar, 09. Frequency
Brazil	Black people	0.8	50	27.7% men (entire study)	Genotyping	42.1 ± 16 (entire study)	Randomly selected asymptomatic and dyspeptic individuals (volunteers)	Mattar, 09. Frequency
Brazil	Japanese-Brazilians	1	53	study)	Genotyping	42.1 ± 16 (entire study)	Randomly selected asymptomatic and dyspeptic individuals (volunteers)	Mattar, 09. Frequency
Cambodia	Cambodian	1	22	Not specified	Genotyping	Not specified	DNA samples. Selection criteria not further specified	Bersaglieri, 04
Cameroon*	Mixed	0.949	928		Genotyping			
Cameroon	Mambila	1	122	Not specified	Genotyping	Not specified	Not specified	Jones, 2015. Diversity (supplementa
Cameroon	Mambila	0.99	244	Not specified	Genotyping	Not specified	DNA samples. Selection criteria not further specified	Mulcare,04
Cameroon	Shuwa Arab	0.849	102	Not specified	Genotyping	Not specified	Not specified	Jones, 2015. Diversity (supplementa
Cameroon	Fulbe	0.79	98	Not specified	Genotyping	Not specified	DNA samples. Selection criteria not further specified	Mulcare, 04
Cameroon	Hausa	0.74	36	Not specified	Genotyping	Not specified	DNA samples. Selection criteria not further specified	Mulcare, 04
Cameroon	Nso	1	252	Not specified	Genotyping	Not specified	DNA samples. Selection criteria not further specified	Mulcare, 04
Cameroon	Yamba	1	42	Not specified	Genotyping	Not specified	DNA samples. Selection criteria not further specified	Mulcare, 04
Cameroon	Pygmy	1	32	Not specified	Genotyping	Not specified	Not specified	Jones, 2015. Diversity (supplementa
Canada	Mixed	0.59	39					
Canada	Manitoban Indians (Sioux and Saulteux)	0.91	22	Not specified	LTT (def. b)	16+	Randomly chosen from community	Ellestad Sayed, 1977. Disaccharide
Canada	Czechoslovakian immigrants in Western Canada	0.176	17	42% men (entire study)	LTT (def. b)	17-65 (entire stu	Healthy, randomly selected volunteers (immigrants)	Leichter, 1972. Lactose
Chile*	Mixed	0.558	265	N/A	Genotyping, HBT			
Chile	Not specified	0.34	121	22 % men	HBT (def. 2) and genotyping	Average 20.8 (18-25)	Healthy, randomly selected volunteers (students). Double blinded placebo study.	Latorre, 2014. Prevalence
Chile	Mapuche Populations From Southern Chile	0.9	29	Not specified	Genotyping	18+	Sampling was performed in local markets, public squares, community centers, and volunteer residences at different rural locations	Fernandez, 2014. Brief
Chile	Mestizo Populations From Southern Chile	0.7	115	Not specified	Genotyping	18+	Sampling was performed in local markets, public squares, community centers, and volunteer residences at different rural locations	Fernandez, 2014. Brief
China*	Mixed	0.845	1754	N/A	Genotyping, HBT			
China	People from 13 different regions in China	1	330	Not specified	Genotyping	Not specified	DNA samples. Selection criteria not further specified	Bersaglieri, 04 (with adaptations in Ita
China	Mongol	0.951	82	Not specified	Genotyping	Not specified	A total of 373 healthy unrelated individuals were randomly selected from 5 northern Chinese populations.	Sun, 07. The
China	Mongol	0.81	20	Not specified	Genotyping	Not specified	DNA samples. Selection criteria not further specified	Bersaglieri, 04 (with adaptations in Ita
China	Uygur	0.9	20	Not specified	Genotyping	Not specified	DNA samples. Selection criteria not further specified	Bersaglieri, 04 (with adaptations in Ita

China	Kazakh in the north of China	0.764	195	150M,45F	HBT (def. 1)	Average 20.9 (16-28)	Healthy volunteers (students and teaching staff of Xinjiang University in Urumchi)	Wang, 84. Prevalence
China	Kazak	0.904	94	Not specified	Genotyping	Not specified	A total of 373 healthy unrelated individuals were randomly selected from 5 northern Chinese populations.	Sun, 07. The
China	Man	1	75	Not specified	Genotyping	Not specified	A total of 373 healthy unrelated individuals were randomly selected from 5 northern Chinese populations.	Sun, 07. The
China	Oroqen	0.978	45	Not specified	Genotyping	Not specified	A total of 373 healthy unrelated individuals were randomly selected from 5 northern Chinese populations.	Sun, 07. The
China	Hezhen	1	77	Not specified	Genotyping	Not specified	A total of 373 healthy unrelated individuals were randomly selected from 5 northern Chinese populations.	Sun, 07. The
China	People in Sichuan	0.36	182	Not specified	HBT (def. 1)	20-70	Healthy volunteers, cluster random sampling method	Qiao, 11. Milk
China	Not specified	0.281	64	33 m, 31 f	HBT (unspecified)	Mean 41	Presumably healthy controls.	Luo, 13. Lactose
China	Singapore-born Chinese	0.95	77	50M,27F	HBT (def.1)	Mean 23 (19-35)	Healthy volunteers in prevalence study	Yap, 89. Lactase
China	Canada-born Chinese	0.98	49	23M,26F	HBT (def. 1)	Mean 19.7 (14-33)	Healthy volunteers in prevalence study	Yap, 89. Lactase
China	Han Chinese	1	100	Not specified	Genotyping	Not specified	Population samples. GenBank accession number DQ109677	Enattah, 2007. Evidence
China	Han Chinese in the north of China	0.923	248	141M,107F	HBT (def. 1)	Average 25.5 (17-35) Mean 37.1	Healthy volunteers (members of staff of three institutes of Academic Sinica in Beijing, and cadres or workers of two agricultural institutions in the same area)	Wang, 84. Prevalence = Yongfa 84
China	Not specified	0.91	32	About 50 % men	HBT (def. 1)	±11.5	Healthy control subjects	Zhao, 10. Lactose
China	People in Hangzhou, ethnicity not specified	0.75	64	33M,31F	HBT (def. 1)	Mean 41	Healthy control subjects without history of digestive symptoms were recruited through public advertisement.	Zhu, 2013. Bloating
Colombia	Caribbean	0.8	128	Not specified	Genotyping	Mean 35 (17-69)	A group of 128 healthy individuals. None of the individuals were smokers, showed digestive disease, had undergone abdominal surgery nor had undergone antibiotic treatment within the last 3 months preceding the study.	Mendoza, 12. Diagnosis
Congo	Brazaville	1	90	Not specified	Genotyping	Not specified	Not specified	Jones, 2015. Diversity (supplementa
Crete	Not specified	0.56	50	Not specified	LTT (def. a)	Mean 23.3	Healthy volunteers	Kanaghinis, 1974. Primary
Cyprus	Greek Cypriots	0.66	50	Not specified	LTT (def. a)	Mean 21.5	Healthy volunteers	Kanaghinis, 1974. Primary
DR Congo	Bantu speakers	1	11	Not specified	Genotyping	Not specified	Not specified	Breton, 2014. Lactase
Denmark	Danes	0.044	91	Not specified	LTT (def. a)	20+	Healthy volunteers (medical students)	Busk, 1975. Incidence
Egypt*	Mixed	0.343	172	165M,7F	LTT (def. c)	19-65	Healthy subjects (high-school students, residents of Baries oasis, and workers in a phosphate mine)	Hussein, 1994. The frequency
Egypt	Ethnic groups from the New Valley in the Western Desert	0.51	100	100M,0F	LTT (def. c)	19-65	Healthy subjects (high-school students, residents of Baries oasis, and workers in a phosphate mine)	Hussein, 1994. The frequency
Egypt	Ethnic groups from Sinai in the Eastern Desert	0.11	72	65M,7F	LTT (def. c)	15-69	Healthy subjects (workers in a coal mine, goat and camel shepherds, fisher men)	Hussein, 1994. The frequency Lember, 06. Lactase non-persistence
Estonia	Estonians (at least 3 grand parents Estonians)	0.248	314	About 45 % men	Genotyping	25-70	Population study (randomly selected)	
Ethiopia*	Mixed	0.811	1182		Genotyping			

Ethiopia	Afar	0.309	144	Not specified	Genotyping	Not specified	Not specified	Jones, 2015. Diversity (supplementa
Ethiopia	Amharic	0.763	142	Not specified	Genotyping	Not specified	Not specified	Jones, 2015. Diversity (supplementa
Ethiopia	Anuak	1	138	Not specified	Genotyping	Not specified	Not specified	Jones, 2015. Diversity (supplementa
Ethiopia	Maale	0.784	122	Not specified	Genotyping	Not specified	Not specified	Jones, 2015. Diversity (supplementa
Ethiopia	Manjo	0.903	60	Not specified	Genotyping	Not specified	Not specified	Jones, 2015. Diversity (supplementa
Ethiopia	Nuer	1	238	Not specified	Genotyping	Not specified	DNA samples. Selection criteria not further specified	Mulcare, 04
Ethiopia	Nuer	1	66	Not specified	Genotyping	Not specified	Not specified	Jones, 2015. Diversity (supplementa
Ethiopia	Oromo	0.657	148	Not specified	Genotyping	Not specified	Not specified	Jones, 2015. Diversity (supplementa
Ethiopia	Shabo	1	40	Not specified	Genotyping	Not specified	Not specified	Jones, 2015. Diversity (supplementa
Ethiopia	Suri	0.907	84	Not specified	Genotyping	Not specified	Not specified	Jones, 2015. Diversity (supplementa
Finland*	Mixed	0.19	5003		Genotyping, LTT			
Finland	Mountain Saami (Inari)	0.37	75	Not specified	LTT (def. g)	Not specified	Not specified	Kozlov, 97
Finland	Mountain Saami (Utsjoki)	0.34	158	Not specified	LTT (def. g)	Not specified	Not specified	Kozlov, 97
Finland	Saami (Inari, fisher)	0.25	110	Not specified	LTT (def. g)	Not specified	Not specified	Kozlov, 97
Finland	Not specified	0.176	2265	Not specified	Genotyping	24-39	Prospective cohort study (The Cardiovascular Risk in Young Finns Study). Randomly selected from the national population register, Recruits of the Finnish Army men of similar age who had postponed their military service for reasons not related to health.	Lehtimaki, 06. The effects
Finland	Not specified	0.171	234	234M,0F	Genotyping	18.3-20.6	Control group. Recruits of the Finnish Army men of similar age who had postponed their military service for reasons not related to health.	Enattah, 2004. Molecularly
Finland	Not specified	0.18	1900	Not specified	Genotyping	18-64		Anthoni, 2007. Molecularly
Finland	Saami	0.667	30	Not specified	Genotyping	Not specified	Population samples. GenBank accession number DQ109677	Enattah, 2007. Evidence
Finland	Eastern Finland	0.234	77	Not specified	Genotyping	Not specified	Population samples. GenBank accession number DQ109677	Enattah, 2007. Evidence
Finland	Western Finland	0.163	154	Not specified	Genotyping	Not specified	Population samples. GenBank accession number DQ109677	Enattah, 2007. Evidence
France*	Mixed	0.251	123		Genotyping			
France	French	0.32	58	Not specified	Genotyping	Not specified	DNA samples. Seletion criteria not further specified	Bersaglieri, 04 (with adaptions in Ita
France	French Basque	0.11	48	Not specified	Genotyping	Not specified	DNA samples. Seletion criteria not further specified	Bersaglieri, 04 (with adaptions in Ita
France	Not specified	0.412	17	Not specified	Genotyping	Not specified	Population samples. GenBank accession number DQ109677	Enattah, 2007. Evidence
Germany	Ethnic germans	0.148	1805	1572M,233F	HBT (def. 1)	Mean 20.3 (16-52)	Healthy volunteers. Consprited soldiers, students, health workers.	Flatz, 1982. Distribution
Ghana*	Mixed	1	302	Not specified	Genotyping	Not specified		
Ghana	Ghanaian	1	196	Not specified	Genotyping	Not specified	The study material consisted of 171 samples collected from Southern Africa for the study of genetic risk factors affecting esophageal cancer	Torniainen, 09. Screening
Ghana	Asante	1	68	Not specified	Genotyping	Not specified	Not specified	Jones, 2015. Diversity (supplementa
Ghana	Builsa	1	38	Not specified	Genotyping	Not specified	Not specified	Jones, 2015. Diversity (supplementa
Great Britain*	Mixed	0.085	3502					
Great Britain (England)	White in West Birmingham	0.03	67	Not specified	Intestinal biopsy	Not specified	Dyspepsia patients attending for routine upper GI endoscopy. Patients with intestinal disease excluded. To ensure representativeness, HBT were performed on a control group of 20 healthy adult volunteers (10 Indian and 10 Afro-Caribbean).	Iqbal, 1993. Prevalence

Great Britain (England)	Indians in West Birmingham	0.55	55	Not specified	Intestinal biopsy	Not specified	Dyspepsia patients attending for routine upper GI endoscopy. Patients with intestinal disease excluded. To ensure representativeness, HBT were performed on a control group of 20 healthy adult volunteers (10 Indian and 10 Afro-Caribbean).	Iqbal, 1993. Prevalence
Great Britain (England)	Afro Caribbeans in West Birmingham	0.82	50	Not specified	Intestinal biopsy	Not specified	Dyspepsia patients attending for routine upper GI endoscopy. Patients with intestinal disease excluded. To ensure representativeness, HBT were performed on a control group of 20 healthy adult volunteers (10 Indian and 10 Afro-Caribbean).	Iqbal, 1993. Prevalence
Great Britain (England)	South East England (white)	0.091	1013	0M,1013F	Genotyping	Mean 69 (60-79)	Population sample with data from the British Women's Heart and Health Study. British-born women identified as white and who have complete data for genotype, area of birth and area of residence data	Smith, 09. Lactase
Great Britain (England and Wales)	Midland and Wales (white)	0.058	499	0M,499F	Genotyping	Mean 69 (60-79)	Population sample with data from the British Women's Heart and Health Study. British-born women identified as white and who have complete data for genotype, area of birth and area of residence data	Smith, 09. Lactase
Great Britain (England)	North England (white)	0.062	1361	0m,1361F	Genotyping	Mean 69 (60-79)	Population sample with data from the British Women's Heart and Health Study. British-born women identified as white and who have complete data for genotype, area of birth and area of residence data	Smith, 09. Lactase
Great Britain (Scotland)	Scotland (white)	0.041	442	0m,442F	Genotyping	Mean 69 (60-79)	Population sample with data from the British Women's Heart and Health Study. British-born women identified as white and who have complete data for genotype, area of birth and area of residence data	Smith, 09. Lactase
Great Britain (Wales)	Wales (white)	0	15	4 m, 11 f	Genotyping	Mean 40.7 (25-60)	Healthy, white Europeans.	Waud, 08. Measurement
Greece*	Mixed	0.557	900		Genotyping, HBT, LTT			
Greece	Greek	0.83	100	Not specified	Genotyping	Not specified	Blood and buccal swab samples were obtained from unrelated donors upon informed consent.	Anagnostou, 09. Tracing
Greece	Not specified	0.75	200	93M,107F	HBT (def. 1)	Mean 37 (15-80)	Healthy volunteers in prevalence study	Ladas, 1982. Lactose
Greece	Continental Greeks	0.447	600	Not specified	LTT (def. a)	Mean 39.5	In-patients from medical wards. Most without GI diseases	Kanaghinis, 1974. Primary
Hungary*	Mixed	0.386	1176					
Hungary	Present day Hungarians	0.39	181	Not specified	Genotyping	Not specified	Random samples from volunteers. Health not specified	Nagy, 11. Comparison
Hungary	Seklers (Eastern Transylvania)	0.29	65	Not specified	Genotyping	Not specified	Random samples from volunteers. Health not specified	Nagy, 11. Comparison
Hungary	Caucasian-Hungarian individuals	0.37	110	Not specified	Genotyping	19-26	Randomly selected volunteers (control group). Health not specified	Nagy, 09. Prevalence
Hungary	General population	0.37	535	170M,365F	HBT (def. 1)	Mean 21.7 (17-39)	Healthy volunteers (students and staff members of several educational institutions)	Czeizel, 1983. Prevalence
Hungary	Matyos	0.366	172	0M,172F	HBT (def. 1)	Mean 38.6 (16-54)	Not specified	Czeizel, 1983. Prevalence
Hungary	Romai	0.558	113	90M,23F	HBT (def. 1)	Mean 28.5 (16-47)	Not specified	Czeizel, 1983. Prevalence
India*	Mixed	0.569	768		Genotyping, HBT, LTT			

India	Natives from Northern India	0.61	252	197M,55F	Genotyping	37.2 ± 11.5	Control subjects in IBS-study. Healthy (no psychiatric or medical illness)	Kumar, 2011. Frequency
India	New Dehli	0.267	45	19 M, 26 F	HBT (def. 1)	Mean 36,2	Healthy controls	Gupta, 12. Evaluation
India	North	0.675	77	55M,22F	Genotyping	37.8 ± 17.7	Healthy volunteers	Babu, 2010, Frequency
India	North	0.274	124	76M,48F	LTT (def. a)	11-65	Healthy volunteers	Tandon, 81. Lactose
India	Not specified	0.6	53	38 M, 15 F	HBT (def. 1)	Mean 33,5	Healthy controls	Gupta, 07. Lactose
India	Not specified	0.585	81	81M,0F	HBT (def. 2)	67.4 ± 10.4	Control subjects in prostate cancer study. Healthy volunteers (consisting of patients' attendants and hospital staff).	Agarwal, 2008. Lactose
India	South	0.666	60	22M,38F	LTT (def. a)	10-70	Healthy volunteers	Tandon, 81. Lactose
India	South	0.868	76	37M,49F	Genotyping	41.3 ± 15	Healthy volunteers	Babu, 2010, Frequency
Iran*	Mixed	0.848	52		Genotyping, LTT			
Iran	Iranians	0.86	21	12M,9F	LTT (def. b)	20-25	Healthy volunteers (students)	Sadre, 79. Lactose
Iran	Iranians	0.81	21	Not specified	Genotyping	Not specified	Not specified	Enattah, 2007. Evidence
Iran	Qashqai	0.9	10	Not specified	Genotyping	Not specified	Population samples. GenBank accession number DQ109677	Enattah, 2007. Evidence
Iraq	Iraqi in Israel	0.93	96	Not specified	Genotyping	Not specified	Healthy Israelis undergoing routine genetic carrier screening tests (...) genetic population studies.	Raz, 13. Frequency
Ireland	Irish	0.04	50	25M,25F	LTT (def. d)	Mean 37.6 (16-68)	Essentially healthy Irish adults attending the out-patient department of the Charitable Infirmary	Fielding, 1981. The incidence
Israel*	Mixed	0.902	706		Genotyping, LTT			
Israel	Arabs	0.806	67	Not specified	LTT (def. 1)	Not specified	Sixty-seven adult subjects were studied, 49 from Tira and 18 from Taybeah, both old established villages located on the coastal plain of Israel. All subjects were attending the government health centers of their respective villages for various reasons.	El Schallah, 73. Lactose
Israel	Ashkenazi in Israel	0.83	96	Not specified	Genotyping	Not specified	Healthy Israelis undergoing routine genetic carrier screening tests (...) genetic population studies.	Raz, 13. Frequency
Israel	Bedouin	0.94	98	Not specified	Genotyping	Not specified	DNA samples. Seletion criteria not further specified	Bersaglieri, 04 (with adaptions in Ita
Israel	Bedouin-Arabs in Israel	0.97	151	Not specified	Genotyping	Not specified	Healthy Israelis undergoing routine genetic carrier screening tests (...) genetic population studies.	Raz, 13. Frequency
Israel	Druze	0.96	96	Not specified	Genotyping	Not specified	DNA samples. Seletion criteria not further specified	Bersaglieri, 04 (with adaptions in Ita
Israel	Morrocan Jews in Israel	0.82	96	Not specified	Genotyping	Not specified	Healthy Israelis undergoing routine genetic carrier screening tests (...) genetic population studies.	Raz, 13. Frequency
Israel	Palestinian arabs	0.92	102	Not specified	Genotyping	Not specified	DNA samples. Seletion criteria not further specified	Bersaglieri, 04 (with adaptions in Ita
Italy*	Mixed	0.718	2693					
Italy	Apulia	0.82	157	155 m, 2 f	Genotyping	Mean 38 (19-47)	Blood samples of 2 healthy individuals were randomly collected.	Piepoli, 07. Genotyping
Italy	Central	0.81	98	Not specified	Genotyping	Not specified	Blood and buccal swab samples were obtained from unrelated donors upon informed consent.	Anagnostou, 09. Tracing
Italy	Central populations	0.185	65	Not specified	LTT (def. b)	Not specified	Mixture of blood donors, students, and obese pasients recruited from different departments of Endocrine and Metabolic Diseases.	Cavalli-Sforza, 1987. Primary
Italy	Central-North	0.75	206	Not specified	Genotyping	Not specified	Blood and buccal swab samples were obtained from unrelated donors upon informed consent.	Anagnostou, 09. Tracing
Italy	Napolitans	0.84	31	Not specified	LTT (def. f)	Not specified	Presumeably healthy individuals (controls).	Rinaldi, 84. High
Italy	North-Eastern	0.57	219	Not specified	Genotyping	Not specified	Blood and buccal swab samples were obtained from unrelated donors upon informed consent.	Anagnostou, 09. Tracing

Italy	Northern populations	0.517	89	Not specified	LTT (def. b)	Not specified	Mixture of blood donors, students, and obese patients recruited from different departments of Endocrine and Metabolic Diseases.	Cavalli-Sforza, 1987. Primary
Italy	North Italians	0.51	208	Not specified	HBT (def. 1)	Not specified	Apparently healthy adults. Most of the subjects were staff members or students from these institutions.	Burgio, 1984. Prevalence
Italy	Not specified	0.71	125	Not specified	Genotyping	Not specified	125 randomly selected healthy blood donors.	Mottes, 08. Genetic
Italy	Not specified	0.7	69	34 m, 35 f	HBT (def. 1)	Mean 40 (20-64)	Presumably healthy individuals (controls).	Sciarretta, 84. Hydrogen
Italy	Not specified	0.62	42	24 m, 18 f	HBT (def. 1)	Median 39 (16-73)	Healthy medical staff members and inpatients with no gastrointestinal symptoms or any systemic disease known to affect intestinal motility or absorption. Control group	Bozzani, 1986. Lactose
Italy	Sardinia	0.86	153	Not specified	Genotyping	Not specified	Blood and buccal swab samples were obtained from unrelated donors upon informed consent.	Anagnostou, 09. Tracing
Italy	Sardinia	0.9	383	Not specified	Genotyping	3-19	Patients from the Gastroenterology Unit at the Hospital Microcitemico in Cagliari, Italy. All of the patients were from Sardinia. Of the 392 patients, 9 were excluded from the study because a secondary cause of hypolactasia was found	Schirru, 07. Decline
Italy	Sardinia	0.88	97	39 m, 58 f	Genotyping	Mean 22 (1-73)	Blood samples of 2 healthy individuals were randomly collected.	Piepoli, 07. Genotyping
Italy	Sardinia	0.783	120	99 m, 21 f	Genotyping	Mean 35	Healthy, asymptomatic subjects recruited randomly among hospital staff (doctors, students, etc.).	Obinu, 10. Prevalence
Italy	Sardinia	0.86	50	26M, 24F	HBT (def. 1)	Not specified	Control subjects	Meloni, 2001
Italy	Sicily	0.38	141	Not specified	HBT (def. 1)	17-64	A randomized sample of the general population in a small center in Sicily.	Carroccio, 1998. Lactose
Italy	Sicily	0.71	100	Not specified	HBT (def. 1)	Not specified	Apparently healthy adults. Most of the subjects were staff members or students from these institutions.	Burgio, 1984. Prevalence
Italy	Southern	0.85	189	Not specified	Genotyping	Not specified	Blood and buccal swab samples were obtained from unrelated donors upon informed consent.	Anagnostou, 09. Tracing
Italy	Southern populations	0.412	51	Not specified	LTT (def. b)	Not specified	Mixture of blood donors, students, and obese patients recruited from different departments of Endocrine and Metabolic Diseases.	Cavalli-Sforza, 1987. Primary
Italy	Southern Italy	0.89	100	Not specified	Genotyping	Not specified	Population samples. GenBank accession number DQ109677	Enattah, 2007. Evidence
Japan	Not specified	0.725	40	Not specified	LTT (def. b)	Not specified	Randomly selected healthy adults.	Yoshida, 75. Studies
Jordan	Jordanian Bedouin	0.43	46	Not specified	Genotyping	Not specified	Not specified	Ingram, 2009. Lactose digestion (Su)
Kazakhstan	Not specified	0.747	83	Not specified	HBT (def. 1)	Not specified	83 Kazakh living in the city of Gazli situated north of Bukhara city (close to the Kazakh border), belonging to the Turkic language family and being traditionally nomadic herders.	Heyer, 2011. Lactase
Kenya*	Mixed	0.387	410		Genotyping, LTT			
Kenya	Bantu	1	24	Not specified	Genotyping	Not specified	DNA samples. Selection criteria not further specified	Bersaglieri, 04 (with adaptations in Ita
Kenya	Mixed	0.26	192	Not specified	LTT (def. a)	Not specified		Tishkoff, 07

Kenya	Mixed	0.437	194	Not specified	Genotyping	Not specified		Tishkoff, 07
Kuwait*	Mixed	0.501	215		Genotyping, HBT			
Kuwait	Not specified	0.47	70	35M,35F	HBT (def. 1)	Mean 33.4 ± 2.6	Individuals known not to have any gastrointestinal problems	Al Sanae, H. 2003. Comparison
Kuwait	Kuwaiti Bedouin (Ajman tribe)	0.43	37	37 m, 0 f	Genotyping	Not specified	DNA samples collected from ancestrally distinct male Kuwaiti Bedouin.	Hill, 2013. Brief
Kuwait	Kuwaiti Bedouin (Mutran tribe)	0.45	29	29 m, 0 f	Genotyping	Not specified	DNA samples collected from ancestrally distinct male Kuwaiti Bedouin.	Hill, 2013. Brief
Kuwait	Asians	0.58	79	35M,44F	HBT (def. 1)	Mean 34 ± 2.84	Healthy Asian volunteers (physicians, medical students and other hospital workers)	Al Sanae, H. 2003. Comparison
Lebanon	Not specified	0.78	78	44 m, 34 f	LTT (def. b)	17-43	Healthy volunteers, most of them medical students and university employees.	Nasrallah, 79. Lactose
Malaysia*	Mixed	0.873	300					
Malaysia	Malays at Penang Island	0.88	100	68 m, 32 f	Urine galactose excret	18-49	All healthy, working or studying in the University Sains Malaysia	Asmawi, 2006. Hypolactasia
Malaysia	Chinese at Penang Island	0.91	100	41 m, 59 f	Urine galactose excret	18-49	All healthy, working or studying in the University Sains Malaysia	Asmawi, 2006. Hypolactasia
Malaysia	Indians at Penang Island	0.83	100	53m, 47 f	Urine galactose excret	18-49	All healthy, working or studying in the University Sains Malaysia	Asmawi, 2006. Hypolactasia
Malawi*	Mixed	1	378					
Malawi	Bantu	1	310	Not specified	Genotyping	Not specified	DNA samples. Selection criteria not further specified	Mulcare, 04
Malawi	Chewa	1	68	Not specified	Genotyping	Not specified	Not specified	Jones, 2015. Diversity (supplementa
Mexico*	Mixed	0.479	645		HBT, LTT			
Mexico	Not specified	0.655	200	100 m, 100 f)	LTT (def.b)	Mean 25,1 m, mean 24,4 f	Most of the subjects were members of the professional staff of the Institute or were medical- and nursing students. None had diabetes, chronic or acute diarrhea or any other overt disease at the time of study.	Lisker, 78. Intestinal
Mexico	Rural Mexico (Huamantla)	0.74	100	Not specified	LTT (def.b)	18-72	Factory workers	Lisker, 1974. Lactase
Mexico	North	0.16	58	Not specified	HBT (unspecified)	Not specified	Individuals randomly selected from this area in Mexico.	Rosado, 1994. Lactose
Mexico	Central	0.33	180	Not specified	HBT (unspecified)	Not specified	Individuals randomly selected from this area in Mexico.	Rosado, 1994. Lactose
Mexico	South	0.33	107	Not specified	HBT (unspecified)	Not specified	Individuals randomly selected from this area in Mexico.	Rosado, 1994. Lactose
Mongolia	Mongol in the north of China	0.879	198	156M,42F	HBT (def. 1)	Average 21.8 (17-46)	Healthy volunteers (students and teaching staff of the University of Inner Mongolia in Huhehot)	Wang, 84. Prevalence
Morocco*	Mixed	0.803	348		Genotyping			
Morocco	Berber	0.75	154	Not specified	Genotyping	Not specified	DNA samples. Selection criteria not further specified	Mulcare, 04
Morocco	Moroccans	0.834	12	Not specified	Genotyping	Not specified	Population samples	Enattah, 2008. Independent
Morocco	Not specified	0.689	90	Not specified	Genotyping	Not specified	Population samples. GenBank accession number DQ109677	Enattah, 2007. Evidence
Mozambique	Sena	1	92	Not specified	Genotyping	Not specified	Not specified	Jones, 2015. Diversity (supplementa
Namibia*	Mixed	0.87	92		Genotyping			
Namibia	San	1	14	Not specified	Genotyping	Not specified	DNA samples. Selection criteria not further specified	Bersaglieri, 04 (with adaptations in Ita
Namibia	San	1	22	Not specified	Genotyping	Not specified	Not specified	Jones, 2015. Diversity (supplementa
Namibia	San	0.95	20	Not specified	Genotyping	Not specified	Not specified	Breton, 2014. Lactase
Namibia	Khoe speaking	0.5	22	Not specified	Genotyping	Not specified	Not specified	Breton, 2014. Lactase
Namibia	Bantu speakers	1	14	Not specified	Genotyping	Not specified	Not specified	Breton, 2014. Lactase
Netherlands*	Mixed	0.104	7259		Genotyping, HBT			
Netherlands	Dutch	0.167	48	Not specified	HBT (not specified)	Not specified	Healthy students.	Vonk, 00. Lactose



Netherlands	Dutch	0.104	7211	3005M,4206F	Genotyping	55+	Two population-based cohort study on elderly dutch caucasians (6367 individuals from the Rotterdam Study and 844 from the Longitudinal Aging Study Amsterdam (LASA)	Koek, 2010. The
New Zealand	Not specified	0.082	1064	Not specified	Genotyping	Not specified	Randomly selected individuals of the New Zealand population.	Upton, 10. The prevalance
Nigeria	Yoruba	1	50	Not specified	Genotyping	Not specified	DNA samples. Seletion criteria not further specified	Bersaglieri, 04 (with adaptions in Ita
Niger	Tuaregs in the Sahara Desert	0.127	118	51 m, 67 f	HBT (def. 1)	Mean 32,8 (18-48)	Adult Tuaregs. Selection criteria not further specified	Flatz, 1986. Distribution
Norway*	Mixed	0.116	242					
Norway	Not specified	0.038	105	23 m, 82 f	HBT (def. 1)	Mean 47	Healthy persons as controls in the study. The majority were health workers or pensioners.	Farup, 04. Lactose
Norway	Multiple ethnicities	0.175	137	39 m, 98 f	Genotyping	Mean 35,3 (19-82)	Randomly selected adults.	Reinton, 07. Evaluation
Oman*	Mixed	0.959	1132					
Oman	Arabs of Northern Oman	0.973	342	Not specified	Genotyping	20-50	Randomly collected samples of adult healthy Omanis.	Al-Abri, 2012. Distribution
Oman	Omanis of Asian origin	0.719	96	Not specified	Genotyping	20-50	Randomly collected samples of adult healthy Omanis.	Al-Abri, 2012. Distribution
Oman	Dhofori Arabs of Southern Oman	1	210	Not specified	Genotyping	20-50	Randomly collected samples of adult healthy Omanis.	Al-Abri, 2012. Distribution
Oman	Saudi Arabs	0.998	432	Not specified	Genotyping	20-50	Randomly collected samples of adult healthy Omanis.	Al-Abri, 2012. Distribution
Oman	Not specified	0.81	52	31 m, 21 f	HBT (def. 1)	Mean 25 (19-42)	Fifty-two university students and staff from different regions of the Sultanate of Oman volunteered for the study.	Al-Abri, A. 2013. The phenotype
Pakistan*	Mixed	0.649	712		Genotyping, LTT			
Pakistan	Balti	1	23	Not specified	Genotyping	Not specified	Population samples. GenBank accession number DQ109677	Enattah, 2007. Evidence
Pakistan	Balochi	0.41	50	Not specified	Genotyping	Not specified	DNA samples. Seletion criteria not further specified	Bersaglieri, 04 (with adaptions in Ita
Pakistan	Baluch	0.526	19	Not specified	Genotyping	Not specified	Population samples. GenBank accession number DQ109677	Enattah, 2007. Evidence
Pakistan	Brahui	0.44	50	Not specified	Genotyping	Not specified	DNA samples. Seletion criteria not further specified	Bersaglieri, 04 (with adaptions in Ita
Pakistan	Brahui	0.567	30	Not specified	Genotyping	Not specified	Population samples. GenBank accession number DQ109677	Enattah, 2007. Evidence
Pakistan	Burusho	0.81	50	Not specified	Genotyping	Not specified	DNA samples. Seletion criteria not further specified	Bersaglieri, 04 (with adaptions in Ita
Pakistan	Burusho	0.967	30	Not specified	Genotyping	Not specified	Population samples. GenBank accession number DQ109677	Enattah, 2007. Evidence
Pakistan	Hazara	0.85	50	Not specified	Genotyping	Not specified	DNA samples. Seletion criteria not further specified	Bersaglieri, 04 (with adaptions in Ita
Pakistan	Hazara	0.929	14	Not specified	Genotyping	Not specified	Population samples. GenBank accession number DQ109677	Enattah, 2007. Evidence
Pakistan	Kalash	1	50	Not specified	Genotyping	Not specified	DNA samples. Seletion criteria not further specified	Bersaglieri, 04 (with adaptions in Ita
Pakistan	Kalash	1	30	Not specified	Genotyping	Not specified	Population samples. GenBank accession number DQ109677	Enattah, 2007. Evidence
Pakistan	Kashmiri	0.75	20	Not specified	Genotyping	Not specified	Population samples. GenBank accession number DQ109677	Enattah, 2007. Evidence
Pakistan	Makrani Baluch	0.655	29	Not specified	Genotyping	Not specified	Population samples. GenBank accession number DQ109677	Enattah, 2007. Evidence
Pakistan	Mohannes	0.552	29	Not specified	Genotyping	Not specified	Population samples. GenBank accession number DQ109677	Enattah, 2007. Evidence
Pakistan	Parsi	0.724	29	Not specified	Genotyping	Not specified	Population samples. GenBank accession number DQ109677	Enattah, 2007. Evidence

Pakistan	Pathan	0.49	50	Not specified	Genotyping	Not specified	DNA samples. Selection criteria not further specified	Bersaglieri, 04 (with adaptations in Ita
Pakistan	Pathan	0.429	28	Not specified	Genotyping	Not specified	Population samples. GenBank accession number DQ109677	Enattah, 2007. Evidence
Pakistan	Punjabi	0.45	53	43 m, 10 f	LTT (def. b)	13-65	44 patients from Rawalpindi General Hospital, Rawalpindi, andt	Abbas, H. 1983. Persistence
Pakistan	Sindhi	0.46	50	Not specified	Genotyping	Not specified	DNA samples. Selection criteria not further specified	Bersaglieri, 04 (with adaptations in Ita
Pakistan	Sindi	0.357	28	Not specified	Genotyping	Not specified	Population samples. GenBank accession number DQ109677	Enattah, 2007. Evidence
Papua New Guinea*	Mixed	0.883	69		Genotyping, HBT			
Papua New Guinea Provinces	East and West Sepik	0.77	35	Not specified	HBT (def. 1)	Not specified	Adult volunteers. Only one of these suffered with gastro-intestinal symptoms. The sample was not ethnically coherent, though it generally represented the north-west of Papua New Guinea.	Arnhold, 1981. Persistent
Papua New Guinea	Papuan	1	34	Not specified	Genotyping	Not specified	DNA samples. Selection criteria not further specified	Bersaglieri, 04 (with adaptations in Ita
Poland*	Mixed	0.347	496		Genotyping, HBT, LTT			
Poland	Not specified	0.375	275	61 m, 214 f	HBT (unspecified)	Mean 29,1	Apparently healthy Polish individuals	Socha, 84. Prevalence
Poland	Not specified	0.315	200	Not specified	Genotyping	18-20	Randomly chosen healthy subjects of Polish origin	Madry, 10. Adult-type
Poland	Polish immigrants in Western Canada	0.285	21	16 m, 22 f (the entire study)	LTT (def. b)	Mean 29,8 (17-65). (The entire study)	38 healthy adults of Slavic origin who had recently left Eastern Europe and are presently living in Western Canada. Twenty-one of them were born in Poland and 17 in Czechoslovakia. They were either new immigrants or tourists who left their respective countries from 1 month to 5 years ago (mean 2.5 years).	Leichter, 1972. Lactose
Portugal*	Mixed	0.402	199	Not specified	Genotyping	Not specified	Non-related, randomly chosen, native individuals from Portugal.	Manco, 2013. Distribution
Portugal	Portugal North	0.328	64	Not specified	Genotyping	Not specified	Non-related, randomly chosen, native individuals from Portugal.	Manco, 2013. Distribution
Portugal	Portugal Centre	0.357	70	Not specified	Genotyping	Not specified	Non-related, randomly chosen, native individuals from Portugal.	Manco, 2013. Distribution
Portugal	Portugal South	0.523	65	Not specified	Genotyping	Not specified	Non-related, randomly chosen, native individuals from Portugal.	Manco, 2013. Distribution
Rwanda*	Mixed	0.49	102	Not specified	Urine galactose excret	Not specified	Healthy volunteers and students	
Rwanda	Hutu-Hutu	0.58	36	Not specified	Urine galactose excret	Not specified	Healthy volunteers and students	Cox, 1974
Rwanda	Hutu-Tutsi	0.55	11	Not specified	Urine galactose excret	Not specified	Healthy volunteers and students	Cox, 1974
Rwanda	Shi	0.96	28	Not specified	Urine galactose excret	Not specified	Healthy volunteers and students	Cox, 1974
Rwanda	Tussi-Tutsi	0.074	27	Not specified	Urine galactose excret	Not specified	Healthy volunteers and students	Cox, 1974
Russia*	Mixed	0.565	637	Not specified	Genotyping			
Russian	Adygei	0.78	34	Not specified	Genotyping	Not specified	DNA samples. Selection criteria not further specified	Bersaglieri, 04 (with adaptations in Ita
Russia	Daghestan Druss	0.765	17	Not specified	Genotyping	Not specified	Population samples. GenBank accession number DQ109677	Enattah, 2007. Evidence
Russia	Daghestan Nog	0.75	20	Not specified	Genotyping	Not specified	Population samples. GenBank accession number DQ109677	Enattah, 2007. Evidence
Russia	Daghestan mixed	0.826	23	Not specified	Genotyping	Not specified	Population samples. GenBank accession number DQ109677	Enattah, 2007. Evidence
Russia	Erzyas	0.567	30	Not specified	Genotyping	Not specified	Population samples. GenBank accession number DQ109677	Enattah, 2007. Evidence

Russia	Komi	0.7	10	Not specified	Genotyping	Not specified	Population samples. GenBank accession number DQ109677	Enattah, 2007. Evidence
Russia	Mokshas	0.434	30	Not specified	Genotyping	Not specified	Population samples. GenBank accession number DQ109677	Enattah, 2007. Evidence
Russia	Northern Russia	0.356	231	Not specified	Genotyping	17-26	Medical students of Russian origin. Northern Russia. Presumably healthy.	Khabarova, 2009. Prevalence
Russia	Ob-Ugric speakers	0.94	62	Not specified	Genotyping	Not specified	Population samples. GenBank accession number DQ109677	Enattah, 2007. Evidence
Russia	Russian	0.58	50	Not specified	Genotyping	Not specified	DNA samples. Selection criteria not further specified	Bersaglieri, 04 (with adaptations in Ita
Russia	Saami (Kildin)	0.48	50	Not specified	LTT (def. g)	18-55	Unrelated with no diagnosed or suspected genetic or chronic disease	Kozlov, 97
Russia	Udmurts	0.4	30	Not specified	Genotyping	Not specified	Population samples. GenBank accession number DQ109677	Enattah, 2007. Evidence
Russia	Yakut (Siberia)	0.88	50	Not specified	Genotyping	Not specified	DNA samples. Selection criteria not further specified	Bersaglieri, 04 (with adaptations in Ita
Solomon Islands	Melanesian	1	44	Not specified	Genotyping	Not specified	DNA samples. Selection criteria not further specified	Bersaglieri, 04 (with adaptations in Ita
Saudi Arabia*	Mixed	0.228	556	Not specified	Genotyping	Not specified	Not specified	Enattah, 2008, Independent
Saudi Arabia	Arabs	0.218	124	Not specified	Genotyping	Not specified	Not specified	Enattah, 2008, Independent
Saudi Arabia	Mixed	0.231	432	Not specified	Genotyping	Neonates	Neonatal samples (blood donors)	Imtiaz, 2007
Senegal*	Mixed	1	382	Not specified	Genotyping	Not specified	Not specified	Imtiaz, 2007
Senegal	Mandjak	1	186	Not specified	Genotyping	Not specified	DNA samples. Selection criteria not further specified	Mulcare, 04
Senegal	Mandjak	1	92	Not specified	Genotyping	Not specified	Not specified	Jones, 2015. Diversity (supplementa
Senegal	Wolof	1	20	Not specified	Genotyping	Not specified	DNA samples. Selection criteria not further specified	Mulcare, 04
Senegal	Wolof	1	84	Not specified	Genotyping	Not specified	Not specified	Jones, 2015. Diversity (supplementa
Somalia		0.937	79	Not specified	Genotyping	Not specified	Population samples. GenBank accession number DQ109677	Enattah, 2007. Evidence
South Africa*	Mixed	0.767	351	Not specified	Genotyping	Not specified	Not specified	Enattah, 2007. Evidence
South Africa	Askham and Wellington Coloured	0.55	40	Not specified	Genotyping	Not specified	Not specified	Breton, 2014. Lactase
South Africa	South African black population	0.783	115	Not specified	HBT (def. 4)	Not specified	Healthy persons free for gastrointestinal symptoms, from six different tribes.	Segal, 83. Lactase
South Africa	Zulu	0.813	32	Not specified	HBT (def. 4)	Mean 34	Healthy persons free for gastrointestinal symptoms.	Segal, 83. Lactase
South Africa	Tswana	0.833	24	Not specified	HBT (def. 4)	Mean 33.4	Healthy persons free for gastrointestinal symptoms.	Segal, 83. Lactase
South Africa	Sotho	0.652	23	Not specified	HBT (def. 4)	Mean 31	Healthy persons free for gastrointestinal symptoms.	Segal, 83. Lactase
South Africa	Xhosa	0.824	17	Not specified	HBT (def. 4)	Mean 27.2	Healthy persons free for gastrointestinal symptoms.	Segal, 83. Lactase
South Africa	Swazi	0.75	12	Not specified	HBT (def. 4)	Mean 33.5	Healthy persons free for gastrointestinal symptoms.	Segal, 83. Lactase
South Africa	Shangaan	0.86	7	Not specified	HBT (def. 4)	Mean 35.7	Healthy persons free for gastrointestinal symptoms.	Segal, 83. Lactase
South Africa	Colesberg Coloured	0.85	20	Not specified	Genotyping	Not specified	DNA samples. Selection criteria not further specified	Breton, 2014. Lactase
South Africa	San	0.8	20	Not specified	Genotyping	Not specified	DNA samples. Selection criteria not further specified	Breton, 2014. Lactase
South Africa	Bantu speakers	0.83	41	Not specified	Genotyping	Not specified	DNA samples. Selection criteria not further specified	Breton, 2014. Lactase
South Korea*	Mixed	1	499	Not specified	Genotyping	Not specified	Not specified	Enattah, 2007. Evidence
South Korea	South Korean children	1	476	282M,194F	Genotyping	Mean 10.6	Healthy control group included children with past history of neurologic disorders, upper respiratory tract infection, skin disease, and other diseases, but not gastroenteritis. Selection criteria not specified	Choi, 2013. No association
South Korea	South Korean	1	23	Not specified	Genotyping	Not specified	Population samples. GenBank accession number DQ109677	Enattah, 2007. Evidence
Spain*	Mixed	0.285	819	Not specified	Genotyping	Not specified	Not specified	Enattah, 2007. Evidence

Spain	Galicia	0.35	546	About 46.7% men	HBT (def. 1)	14-85	Healthy subjects. No history of GI illness. Sample method not specified	Leis, 97. Prevalence
Spain	Basques	0.083	85	Not specified	Genotyping	Not specified	Population samples. GenBank accession number DQ109677	Enattah, 2007. Evidence
Spain	Basque Country. Ethnicity not specified	0.186	188	88M,100F	Genotyping	Mean 40 ± 12.94 (19-61)	Non-IBD patients designated as healthy controls, recruited blood bank	Elguezabal, 2012. Lactase
Sri Lanka	Not specified	0.725	200	23 m, 177 f	LTT (def. a)	16-78	Patients who presented with trivial nongastrointestinal complaints such as coryza, head-ache, and nonspecific chest pain. Those who presented with gastrointestinal symptoms were excluded.	Senewiratne, 77. Intestinal
Sudan*	Mixed	0.527	1752		Genotyping, HBT, LTT			
Sudan	Beni Amer	0.257	154	Not specified	Genotyping	Not specified	Not specified	Jones, 2015. Diversity (supplementa
Sudan	Fulani	0.296	44	Not specified	Genotyping (only 1391	Not specified	Population samples. GenBank accession number DQ109677	Enattah, 2007. Evidence
Sudan	Dinka	1	68	Not specified	Genotyping (only 1391	Not specified	DNA samples. Selection criteria not further specified	Mulcare, 04
Sudan	Ga'ali	1	60	Not specified	Genotyping (only 1391	Not specified	DNA samples. Selection criteria not further specified	Mulcare, 04
Sudan	Nuer	1	26	Not specified	Genotyping (only 1391	Not specified	DNA samples. Selection criteria not further specified	Mulcare, 04
Sudan	Shaigi	1	22	Not specified	Genotyping (only 1391	Not specified	DNA samples. Selection criteria not further specified	Mulcare, 04
Sudan	Mixed	0.14	43	Not specified	LTT (def. a)	Not specified	People from different areas in Sudan.	Tishkoff, 07
Sudan	Mixed	0.766	44	Not specified	Genotyping	Not specified		Tishkoff, 07
Sudan	Not specified	0.551	563	549 m, 14 f	HBT (def. 1)	Adults (age not specified) Mean 22,6 (14-50)	563 healthy adults. 533 from the Sudanese Peoples Armed Forces, 30 students and employees of the Faculty of Medicine (University of Khartoum)	Bayoumi, 1981. Distribution
Sudan	Beja tribe	0.168	303	277 m, 76 f	HBT (def. 1)	Mean 20,2 (14-42)	585 apparently healthy, well nourished probands.	Bayoumi, 1982. Beja and Nilotes
Sudan	Nilotic tribe	0.745	282	206 m, 76 f	HBT (def. 1)	42)	585 apparently healthy, well nourished probands.	Bayoumi, 1982. Beja and Nilotes
Sudan	Jaali	0.574	128	Not specified	Genotyping	Not specified	Not specified	Jones, 2015. Diversity (supplementa
Sudan	Sahas	0.733	15	Not specified	Genotyping	Not specified	Population samples	Enattah, 2008. Independent
Syria	Arabs in Syria, Iraq, Lebanon, Palestine	0.842	19	Not specified	Genotyping	Not specified	Population samples	Enattah, 2008. Independent
Sweden	Elderly individuals	0.068	392	Not specified	Genotyping	1928.	The majority of the subjects of this study population were born between 1920 and 1932, the mean year of birth 1928. This group constituted a non-randomly sampled cohort re-cruited from study circles for the elderly. All were Caucasians.	Almon, R. 2007. Prevalence
Tanzania*	Mixed	0.454	577		Genotyping, HBT, LTT			
Tanzania	Mixed	0.344	235	Not specified	LTT (def. a)	Not specified	People from different areas in Tanzania.	Tishkoff, 07
Tanzania	Mixed	0.458	256	Not specified	Genotyping	Not specified		Tishkoff, 07
Tanzania	Chagga	0.74	86	Not specified	Genotyping	Not specified	Not specified	Jones, 2015. Diversity (supplementa

Thailand	Not specified	0.385	39 11 m, 28 f	HBT (def. 1)	18-41	Randomly selected healthy volunteers.	Soontornchai, 99. Lactitol
Turkey*	Mixed	0.648	609	Genotyping, HBT, LTT			
Turkey	Not specified	0.217	92 49 m, 43 f	HBT (def. 1)	Mean 44.8	Randomly selected healthy volunteers.	Ahishali, 15. Assessment
Turkey	Not specified	0.83	47 27 m, 20 f	LTT (def. c)	Not specified	Randomly selected healthy volunteers.	Artan, 98. Urinary
Turkey	Central Anatolia	0.71	104 N/A	HBT	Not specified	N/A	Flatz, 1986. Turkey
Turkey	Eastern Anatolia	0.74	122 N/A	HBT	Not specified	N/A	Flatz, 1986. Turkey
Turkey	North coast	0.69	64 N/A	HBT	Not specified	N/A	Flatz, 1986. Turkey
Turkey	South coast	0.72	54 N/A	HBT	Not specified	N/A	Flatz, 1986. Turkey
Turkey	Western Anatolia	0.7	126 N/A	HBT	Not specified	N/A	Flatz, 1986. Turkey
Uganda*	Mixed	0.913	70 Not specified	Genotyping, HBT, LTT			
Uganda	Bantu	1	44 Not specified	Genotyping	Not specified	DNA samples. Selection criteria not further specified	Mulcare, 04
Uganda	Nilotic	0.44	9 Not specified	LTT (def. b)	Mean 22 (16-35)	Healthy volunteers	Cook, 1966.
Uganda	Ugandan Bantu	0.94	17 Not specified	LTT (def. b)	Mean 23 (17-30)	Healthy volunteers	Cook, 1966.
Uruguay*	Mixed	0.649	240 Not specified	HBT	20-86		
Uruguay	Adults (black and white combined)	0.65	120 Not specified	HBT (def. 1)	20-86	Randomly selected patients without previous knowledge of their race or place of origin. Those who had diabetes, a gastroenterologic disease or had taken or were taking antibiotics were not allowed to enroll. Doctors and nurses were included in the study. All were born in Uruguay.	Maggi, 87. Lactose
Uruguay	White adults	0.63	109 Not specified	HBT (def. 1)	20-86	Randomly selected patients without previous knowledge of their race or place of origin. Those who had diabetes, a gastroenterologic disease or had taken or were taking antibiotics were not allowed to enroll. Doctors and nurses were included in the study. All were born in Uruguay.	Maggi, 87. Lactose
Uruguay	Black	0.82	11 Not specified	HBT (def. 1)	20-86	Randomly selected patients without previous knowledge of their race or place of origin. Those who had diabetes, a gastroenterologic disease or had taken or were taking antibiotics were not allowed to enroll. Doctors and nurses were included in the study. All were born in Uruguay.	Maggi, 87. Lactose
USA*	Mixed	0.525	373				
USA	Full blooded Indians of the Great Basin (USA) and American Southwest	0.92	100 Not specified	LTT (def. b)	18+	Healthy volunteers (students)	Johnson, 1978. Lactose
USA	African Americans	0.88	50 Not specified	Genotyping	Not specified	Population samples. GenBank accession number DQ109677	Enattah, 2007. Evidence
USA	Black	0.58	33 26 m, 7 f	LTT (def. f)	11-18.	Randomly selected healthy persons (black) from a pediatric comprehensive care population.	Mitchell, 75. Tolerance
USA	Black (African descent) in Huntsville, Alabama	0.5	52 26 m, 26 f	HBT (def. 1)	20-89	Randomly selected from the U.S. Army, senior citizens' centers, nursing homes and Alabama A&M University, all located in Huntsville, Alabama.	Rao, 94. Prevalence
USA	White (North central European descent) in Huntsville, Alabama	0.17	46 19 m, 27 f	HBT (def. 1)	20-89	Randomly selected from the U.S. Army, senior citizens' centers, nursing homes and Alabama A&M University, all located in Huntsville, Alabama.	Rao, 94. Prevalence

USA	Utah	0.076	92	Not specified	Genotyping	Not specified	Population samples. GenBank accession number DQ109677	Enattah, 2007. Evidence
Uzbekistan	Tajiko-Uzbek in Bukhara	0.89	100	Not specified	HBT (def. 1)	Not specified	Unrelated adult individuals living in the city of Gazli, belonging to the Turkish language family.	Heyer, 2011. Lactase
Vietnam	Vietnamese in USA	1	31	23 m, 8 f	LTT (def. e)	Mean 37 (22-63)	Vietnamese who had been in USA for 0,5 to 19 months (average 4,5 months) at the time of their tests. All of their parents were born in Vietnam. It is not specified how they were picked for the study.	Anh, N. 1977. Lactose
Western Sahara/MiSaharawi		0.53	68	Not specified	Genotyping	Not specified		
Western Sahara/MiSaharawi		0.509	57	Not specified	Genotyping	Not specified	Population samples. GenBank accession number DQ109677	Enattah, 2007. Evidence
Western Sahara/MiSaharawi		0.636	11	Not specified	Genotyping	Not specified	Population samples.	Enattah, 2008. Independent
Yemen	Yemenis	0.998	239	Not specified	Genotyping	20-25	Random samples from adult healthy Yemeni students from Sana'a University.	Al-Abri, 2012. Distribution

HBT definition 1:  
Dosage of 50g  
lactose digested.

LM diagnosed  
when hydrogen  
concentration rose  
above 20 ppm  
from a baseline  
value.

HBT def. 2: Dosage of 25g  
lactose digested. LM  
diagnosed when  
hydrogen concentration  
rose above 20 ppm from  
a baseline value.

HBT def. 3: Dosage of  
50g lactose digested.  
LM diagnosed when  
hydrogen  
concentration rose  
≥10 ppm from a  
baseline value for at  
least two consecutive  
15 min readings

HBT def. 4: Dosage of  
50g lactose. An  
increase of less than  
30 ppm hydrogen in  
expired breath  
following a lactose  
load correlated with  
an increase in blood  
glucose of at least 1  
mmol/l in the lactose  
tolerance test.

<p>LTT (def. a): A peak blood-glucose rise of 20mg/dl or lower in the capillary blood above fasting levels (or rise of 21-25 g/100 ml together with symptoms of intolerance) elicited within 24 hours after the ingestion of lactose.</p>	<p>LTT (def. b) Individuals whose blood glucose rose over the fasting level by 20 mg/dl or more at any time point were classified as lactose absorbers. LM: failure to reach 20 mg/dl.</p>	<p>LTT (def. c) Measurement of urinary galactose in pooled 2-hr urine samples following ingestion of an oral lactose dose of 40 g. LM was defined as urine excretions per 2 hours of less than 0.075 galactose:creatinine (mg/mg).</p>	<p>LTT (def. d) Low lactase activity of below 25unit/gram of protein (normal if 30 or greater and borderline if between 25 and 29.99).</p>	<p>LTT (def. e) Abnormal LTT with a mean blood glucose rise of 5 mg/100 ml over fasting levels (range 0 to 16 mg/100 ml).</p>	<p>LTT (def. f): Malabsorbers if blood glucose &lt; 26 mg/dL</p>	<p>LTT (def. g): LM if capillary glucose level increase &lt; 1,1 mmol/L, immediately and 40 minutes after ingesting 50g lactose in 400 mL water after overnight fasting.</p>
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