

Supplementary Table 3. Nano LC-MS analysis to characterize the five protein bands identified by silver staining.

| Band | Position on gel (kDa) | Accession | Description | MW (kDa) | Sequest-HT score | Coverage (%) | Function |
|------|-----------------------|------------|---|----------|------------------|--------------|---|
| 1 | 140-180 | A0A2A9IP86 | Glutamate synthase large subunit OS=Lactococcus lactis OX=1358 GN=BW154_06430 PE=3 SV=1 | 164.3 | 174.44 | 32 | Pro-tumoural features |
| 2 | 140-180 | N/A | N/A | N/A | N/A | N/A | N/A |
| 3 | 100-140 | A0A2A9IKZ9 | Valine--tRNA ligase OS=Lactococcus lactis OX=1358 GN=valS PE=3 SV=1 | 101 | 347.59 | 60 | Loading valine onto its specific tRNA |
| | | A0A2A9IP05 | Endo-beta-N-acetylglucosaminidase OS=Lactococcus lactis OX=1358 GN=BW154_05500 PE=4 SV=1 | 102.3 | 317.81 | 56 | Processing of free oligosaccharides in the cytosol |
| | | A0A0V8DM88 | Isoleucine--tRNA ligase OS=Lactococcus lactis subsp. lactis OX=1360 GN=ileS PE=3 SV=1 | 106.5 | 288.78 | 48 | Catalysing the attachment of isoleucine to tRNA (Ile) |
| | | A0A0V8CY66 | Valine--tRNA ligase OS=Lactococcus lactis subsp. lactis OX=1360 GN=valS PE=3 SV=1 | 100.5 | 284.84 | 52 | Loading valine onto its specific tRNA |
| | | A0A2N5WA15 | Cytosolic endo-beta-N-acetylglucosaminidase OS=Lactococcus lactis subsp. lactis OX=1360 GN=CYU10_002498 PE=4 SV=1 | 102.4 | 278.21 | 54 | Processing of free oligosaccharides in the cytosol |
| | | A0A0V8BFY1 | Uncharacterized protein OS=Lactococcus lactis subsp. lactis OX=1360 GN=LKF24_2507 PE=4 SV=1 | 102.4 | 251.49 | 47 | N/A |

| | | | | | | | |
|---|---------|-------------------|---|--------------|---------------|-----------|---|
| | | A0A0V8DGH2 | DNA-directed RNA polymerase subunit beta OS=Lactococcus lactis subsp. lactis OX=1360 GN=rpoB PE=3 SV=1 | 133.1 | 223.53 | 45 | Polymerisation of ribonucleotides into complementary DNA |
| | | A0A2A9IMI1 | DNA-directed RNA polymerase subunit beta' OS=Lactococcus lactis OX=1358 GN=rpoC PE=3 SV=1 | 134.7 | 219.77 | 44 | Polymerisation of ribonucleotides into complementary DNA |
| | | D2BLI1 | Isoleucine--tRNA ligase OS=Lactococcus lactis subsp. lactis (strain KF147) OX=684738 GN=ileS PE=3 SV=1 | 106.7 | 218.42 | 36 | Catalysing the attachment of isoleucine to tRNA (Ile) |
| | | A0A2A9INL0 | Alpha-mannosidase OS=Lactococcus lactis OX=1358 GN=BW154_05470 PE=3 SV=1 | 102.6 | 182.86 | 38 | Alpha-mannosidase reduces high-mannose N-glycans, malignant progression markers in early-stage CRC |
| | | D2BKE9 | Alpha-mannosidase OS=Lactococcus lactis subsp. lactis (strain KF147) OX=684738 GN=ypdB PE=3 SV=1 | 102.1 | 167.28 | 36 | CRC |
| | | A0A2A9IR05 | Pyruvate carboxylase OS=Lactococcus lactis OX=1358 GN=BW154_09950 PE=4 SV=1 | 126.5 | 143.83 | 35 | Catalysing the HCO ₃ ⁻ and MgATP-dependent carboxylation of pyruvate to form oxaloacetate |
| 4 | 100-140 | A0A2A9IKZ9 | Valine--tRNA ligase OS=Lactococcus lactis OX=1358 GN=valS PE=3 SV=1 | 101 | 490.21 | 67 | Loading valine onto its specific tRNA |
| | | A0A0V8CY66 | Valine--tRNA ligase OS=Lactococcus lactis subsp. lactis OX=1360 GN=valS PE=3 SV=1 | 100.5 | 425.48 | 59 | Loading valine onto its specific tRNA |
| | | A0A2A9IMI1 | DNA-directed RNA polymerase subunit beta' OS=Lactococcus lactis OX=1358 GN=rpoC PE=3 SV=1 | 134.7 | 333.97 | 57 | Polymerisation of ribonucleotides into complementary DNA |

| | | | | | | | |
|---|---------|------------|---|-------|--------|----|--|
| | | A0A0V8DGH2 | DNA-directed RNA polymerase subunit beta OS=Lactococcus lactis subsp. lactis OX=1360 GN=rpoB PE=3 SV=1 | 133.1 | 274.3 | 55 | Polymerisation of ribonucleotides into complementary DNA |
| | | A0A7L9L7K3 | Discoidin domain-containing protein OS=Lactococcus lactis OX=1358 GN=HZ322_06980 PE=4 SV=1 | 102.4 | 239.12 | 51 | Blood coagulation factor |
| | | A0A2A9IP05 | Endo-beta-N-acetylglucosaminidase OS=Lactococcus lactis OX=1358 GN=BW154_05500 PE=4 SV=1 | 102.3 | 234.55 | 52 | Processing of free oligosaccharides in the cytosol |
| | | A0A2N5WA15 | Cytosolic endo-beta-N-acetylglucosaminidase OS=Lactococcus lactis subsp. lactis OX=1360 GN=CYU10_002498 PE=4 SV=1 | 102.4 | 216.68 | 49 | Processing of free oligosaccharides in the cytosol |
| | | A0A0V8DM88 | Isoleucine--tRNA ligase OS=Lactococcus lactis subsp. lactis OX=1360 GN=ileS PE=3 SV=1 | 106.5 | 216.63 | 46 | Catalysing the attachment of isoleucine to tRNA (Ile) |
| 5 | 100-140 | A0A2A9IMI1 | DNA-directed RNA polymerase subunit beta' OS=Lactococcus lactis OX=1358 GN=rpoC PE=3 SV=1 | 134.7 | 260.25 | 51 | Polymerisation of ribonucleotides into complementary DNA |
| | | A0A2A9IKZ9 | Valine--tRNA ligase OS=Lactococcus lactis OX=1358 GN=valS PE=3 SV=1 | 101 | 240.33 | 48 | Loading valine onto its specific tRNA |
| | | A0A0V8DGH2 | DNA-directed RNA polymerase subunit beta OS=Lactococcus lactis subsp. lactis OX=1360 GN=rpoB PE=3 SV=1 | 133.1 | 201.54 | 43 | Polymerisation of ribonucleotides into complementary DNA |

| | | | | | |
|------------|---|-------|--------|----|---|
| A0A0V8CY66 | Valine--tRNA ligase OS=Lactococcus lactis subsp. lactis OX=1360 GN=valS PE=3 SV=1 | 100.5 | 195.46 | 42 | Loading valine onto its specific tRNA |
| A0A2A9IP05 | Endo-beta-N-acetylglucosaminidase OS=Lactococcus lactis OX=1358 GN=BW154_05500 PE=4 SV=1 | 102.3 | 135.45 | 37 | Processing of free oligosaccharides in the cytosol |
| A0A0V8DM88 | Isoleucine--tRNA ligase OS=Lactococcus lactis subsp. lactis OX=1360 GN=ileS PE=3 SV=1 | 106.5 | 129.92 | 36 | Catalysing the attachment of isoleucine to tRNA (Ile) |
| A0A2N5WA15 | Cytosolic endo-beta-N-acetylglucosaminidase OS=Lactococcus lactis subsp. lactis OX=1360 GN=CYU10_002498 PE=4 SV=1 | 102.4 | 119.31 | 35 | Processing of free oligosaccharides in the cytosol |

MW, molecular weight.