

**S1 Table. Bovine and ovine PrP tryptic peptides and how these have been included in the assays and in plots.** Amino acid residues in **bold**: bovine/ovine interspecies polymorphisms; underlined: ovine intraspecies polymorphisms. pE denotes a pyroglutamyl N-terminal amino acid residue. C<sup>ep</sup> denotes the ethylpyridyl alkylated product of cysteine; N\* indicates an N-glycosylation site.

Tryptic peptide	Bovine	In Assay	Plotted	Ovine	In Assay	Plotted
T1	25K	x	x	25K	x	x
T2	26K	x	x	26K	x	x
T3	27R	x	x	27R	x	x
T4	28PK29	x	x	28PK29	x	x
T5	30PGGGWNTGGSR40	x	x	30PGGGWNTGGSR40	x	x
T6	41YPGQGSPGGNR51 <sup>a</sup>	✓	x	41YPGQGSPGGNR51 <sup>a</sup>	✓	x
T7	52YPPQGGGGWGQPHGGGWGQPHGGGWGQPHGGGWGQPH GGGGWGQGG <b>T</b> H <b>G</b> QWNK104	x	x	52YPPQGGGGWGQPHGGGWGQPHGGGWGQPHGGGWGQPH GGGGWGQGG <u>S</u> <b>H</b> SQWNK104	x	x
T8	105PSK107	x	x	105PSK107	x	x
T9	108PK109	x	x	108PK109	x	x
T10	110TNMK113 <sup>b</sup>	x	x	110TNMK113 <sup>b</sup>	x	x
T11	114HVAGAAAAGAVVGLGGYMLGSAMSR139	✓	✓	114HVAGAAAAGAVVGLGGYMLGS <u>A</u> MSR139 114HVAGAAAAGAVVGLGGYMLGS <u>V</u> MSR139	✓ ✓	✓ ✓
T12	140PLIHF <b>G</b> <b>D</b> YEDR151	✓	✓	140PL <u>I</u> HF <b>G</b> <b>N</b> DYEDR151 140P <u>F</u> IHF <b>G</b> <b>N</b> DYEDR151	✓ ✓	✓ ✓
T13	152YYR154 <sup>b</sup>	x	x	152YY <u>R</u> 154 <sup>b</sup>	x	x
T14	155ENM <b>H</b> R159 <sup>b</sup>	✓	✓ <sup>c</sup>	155ENM <b>Y</b> R159	✓	✓
T15	160YPNQVYYR167	✓	x <sup>d</sup>	160YPNQVYYR167	✓	x <sup>d</sup>
T16	168PVDQYSNQNNFVHDC <sup>ep</sup> VN*ITVK188	✓	x <sup>d</sup>	168PVD <u>Q</u> YSNQNNFVHDC <sup>ep</sup> VN*ITVK188 168PVD <u>H</u> SNQNNFVHDC <sup>ep</sup> VN*ITVK188 168PV <u>D</u> R171	✓ ✓ ✓	x <sup>d</sup> x x
T16'	n/a			172YSNQNNFVHDC <sup>ep</sup> VN*ITVK188	✓	x
T17	189 <b>E</b> HTVTTTK197 <sup>b</sup>	x	x	189 <b>Q</b> HTVTTTK197 189p <b>E</b> HTVTTTK197	✓ ✓	✓ x

T18	198GEN*FTETDIK207	✓	✓	198GEN*FTETDIK207	✓	✓
T19	208 <b>MM</b> ER211 <sup>b</sup>	✗	✗	208 <b>I</b> MER211	✓	✓
T20	212VVEQMC <sup>e</sup> pITQYQR223	✓	✓	212VVEQMC <sup>e</sup> pITQYQR223	✓	✓
T21	224ESQAYYQR231	✓	✓	224ESQAYYQR231	✓	✓
T11-T12	114HVAGAAAAGAVVGG <del>L</del> GYMLGSAMSRPLIHFG <b>S</b> DYE DR151	✗	✗	114HVAGAAAAGAVVGG <del>L</del> GYMLGS <u>AMS</u> RPLIHFG <b>N</b> DYE DR151 114HVAGAAAAGAVVGG <del>L</del> GYMLGS <u>VMS</u> RPLIHFG <b>N</b> DYE DR151 114HVAGAAAAGAVVGG <del>L</del> GYMLGS <u>AMS</u> RPFIHFG <b>N</b> DYE DR151	✓	✓
T11-T13	114HVAGAAAAGAVVGG <del>L</del> GYMLGSAMSRPLIHFG <b>S</b> DYE DRYYR154	✗	✗	114HVAGAAAAGAVVGG <del>L</del> GYMLGS <u>AMS</u> RPLIHFG <b>N</b> DYE DRYY <u>R</u> 154 114HVAGAAAAGAVVGG <del>L</del> GYMLGS <u>VMS</u> RPLIHFG <b>N</b> DYE DRYY <u>R</u> 154 114HVAGAAAAGAVVGG <del>L</del> GYMLGS <u>AMS</u> RPFIHFG <b>N</b> DYE DRYY <u>R</u> 154	✓	✗
T13-T14	152YYREN <b>M</b> R159	✓	✓ <sup>c</sup>	152YY <u>REN</u> <b>M</b> YR159 152YY <u>HEN</u> <b>M</b> YR159	✓	✗
T15-T16	160YPNQVYYRPVDQYSNQNNFVHDC <sup>e</sup> pVN*ITVK188	✓	✓	160YPNQVYYRPVD <u>QYS</u> NQNNFVHDC <sup>e</sup> pVN*ITVK188 160YPNQVYYRPVD <u>HYS</u> NQNNFVHDC <sup>e</sup> pVN*ITVK188 160YPNQVYYRPVDR171	✓	✓
T17-T18	189 <b>E</b> HTVTTTKGEN*FTETDIK207	✗	✗	189 <b>Q</b> HTVTTTKGEN*FTETDIK207 189pEHTVTTTKGEN*FTETDIK207	✓	✗
T17-T19	189 <b>E</b> HTVTTTKGEN*FTETDIK <b>M</b> MER212	✗	✗	189 <b>Q</b> HTVTTTKGEN*FTETDIKIMER212 189pEHTVTTTKGEN*FTETDIKIMER212	✓	✗

<sup>a</sup> Not plotted as not very relevant

<sup>b</sup> Unfavourable chromatographic properties (too hydrophilic) do not allow this peptide to be reliably detected

<sup>c</sup> Signal from bovine T14 and T13-T14 has been combined.

<sup>d</sup> Usually very low abundance due to frequently missed R-P cleavage

<sup>e</sup> Only plotted if ovine H154 polymorphism is present