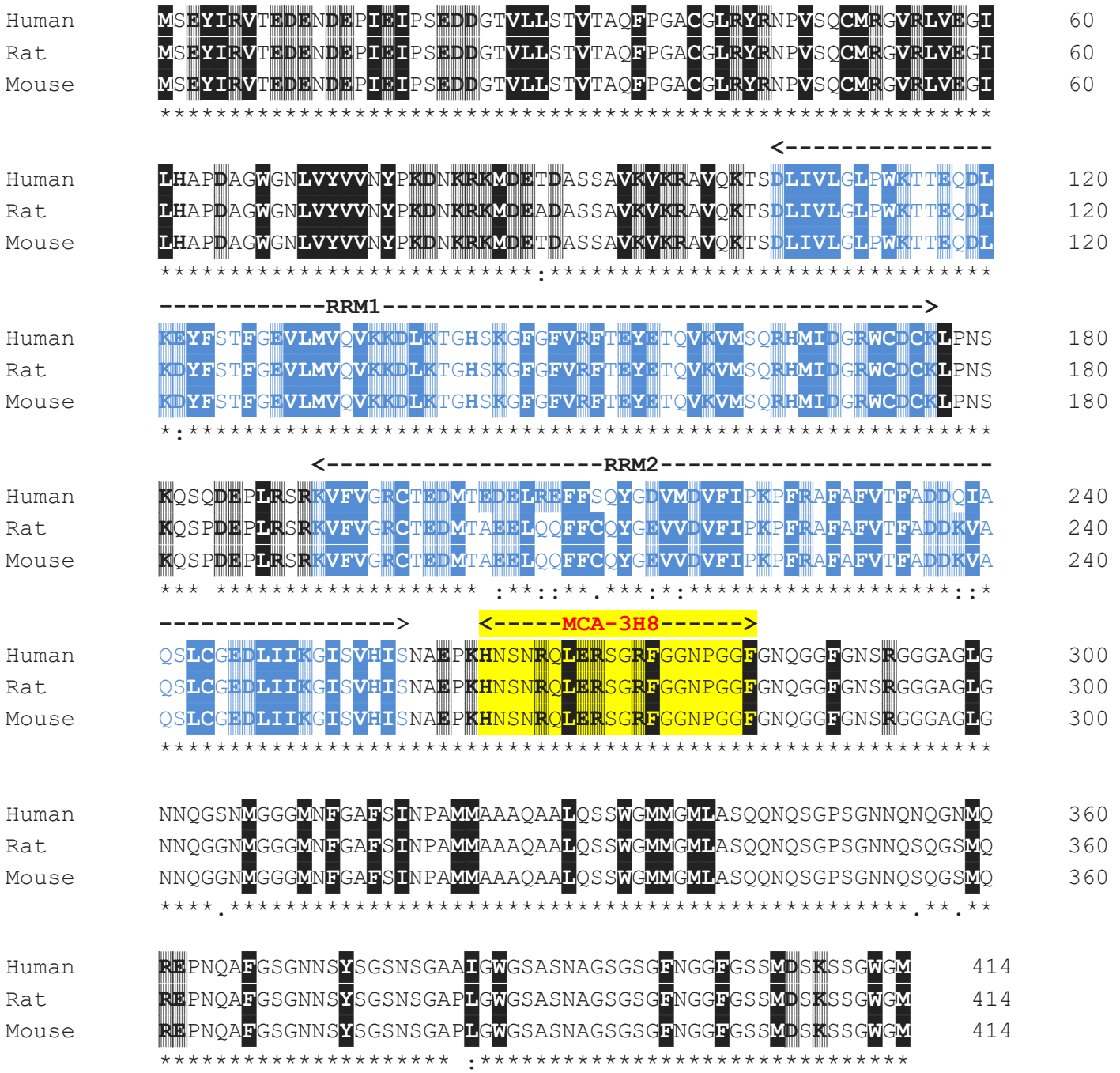
TDP43 sequence alignments and location of EnCor MCA-3H8 epitope



Alignment of human, rat and mouse TDP43 sequences and location of MCA-3H8 epitope. The TDP43 protein contains two RNA recognition motifs (RRM), which are shaded blue. The EnCor MCA-3H8 antibody was raised against recombinant full length human TDP43, and the epitope for this antibody is as shown above in yellow, mapping to the C-terminal region of human TDP43, a region of low sequence complexity. Epitope mapping was performed by generating a series of nested 20 amino acid peptides which covered the entire human sequence with 5 amino acid overlap between neighboring peptides. Only the one indicated peptide, HNSNRQLERSGRFGGNPGGF, amino racids 264-283, strongly inhibited binding of MCA-3H8 to recombinant human TDP43. Since the following peptide had no apparent inhibitory effect on antibody binding while the preceding peptide had a very minor effect, the central 10 amino acids of the peptide is likely the most significant component of the MCA-3H8 epitope with a minor element in the first 5 amino acids. The peptide is 100% conserved in human, rat, mouse and hundreds of other mammalian TDP43 sequences, so that this antibody should be of wide general utility.