Recombinant TMPSC protein (His tag)

Catalog Number	547649
Species	Human
Expression System	E. coli
Accession	Q86WS5
Molecular Weight	Predictes a molecular mass of 30.86 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 31 kDa band.

Product Information

Sequence Region	63-324
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>87%, by SDS-PAGE with Coomassie Brilliant Blue staining.
Endotoxin	Not tested.
Activity	Not tested.
Stability	Samples are stable for up to twelve months from date of receipt at -70℃
Protein Construction	DNA encoding 63-324 aa (Q86WS5) were fused with 6His tag.

Storage & Handling

Reconstitution	Reconstitute at 0.25 μg/μl in sterile water for short-term storage. Reconstitution with 50% glycerol solution is recommended for longer term storage (see Stability and Storage for more details). If a different concentration is needed for your purposes please adjust the reconstitution volume as required (please note: the ion concentration of the final solution will vary according to the volume used). Note: Centrifuge vial before opening. When reconstituting, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution.
Storage	Store it under sterile conditions at -20℃ to -80℃. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Shipping	In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise.

Description

Description	Introducing the recombinant human Transmembrane protease serine 12 (TMPRSS12) fragment (residues 63-324), a high-purity protein designed for studying the catalytic Peptidase S1 domain. This fragment is an essential tool for investigating serine protease activity, sperm function, and fertility-related mechanisms in research applications. Transmembrane protease serine 12 (TMPRSS12) is a membrane-anchored serine protease critical for male fertility, playing indispensable roles in sperm capacitation, acrosome reaction during fertilization, and regulation of spermatogenesis proteins. It localizes to the cell membrane as a single-pass transmembrane protein and is also found in cytoplasmic vesicles and the acrosome of secretory vesicles, with acrosomal expression decreasing post-reaction. TMPRSS12 promotes chromosomal synapsis, double-strand break repair, mitochondrial cristae formation, and apoptosis regulation in developing sperm, while also being required for normal sperm motility and zona pellucida binding, potentially through ADAM3 protein maturation pathways.