Recombinant TM11D protein (His tag)

Catalog Number	537247
Synonyms	Airway trypsin-like protease
Species	Human
Expression System	E. coli
Accession	O60235
Molecular Weight	Predictes a molecular mass of 26.96 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 27 kDa band.

Product Information

Sequence Region	187-418
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>85%, 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 187-418 aa (O60235) 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 11D (TMPRSS11D) fragment (residues 187-418), a high-purity protein designed for studying serine protease activity and viral entry mechanisms. This fragment contains the complete Peptidase S1 domain, making it an essential tool for investigating proteolytic functions in host defense and coronavirus spike protein processing. Transmembrane protease serine 11D (TMPRSS11D), also known as Airway trypsin-like protease, is a membrane-anchored serine protease that plays crucial roles in host defense on mucous membranes. It functions in proteolytic processing of ACE2 and activates human coronavirus 229E (HCoV-229E) spike glycoprotein, facilitating virus-cell membrane fusion. The enzyme demonstrates substrate preference for arginine residues at the P1 position and has optimal activity at pH 8.6. Following cleavage, the catalytic chain is secreted from the cell membrane, where it performs its biological functions in airway mucous and bronchial secretions, potentially cooperating with other substances in mucosal defense systems.