Recombinant TAP2 protein (His tag)

Catalog Number	540178
Synonyms	APT2; ATP-binding cassette sub-family B member 3; Peptide supply factor 2; Peptide transporter PSF2; PSF-2; Peptide transporter TAP2; Peptide transporter involved in antigen processing 2; Really interesting new gene 11 protein; RING11
Species	Human
Expression System	E. coli
Accession	Q03519
Molecular Weight	Predictes a molecular mass of 29.66 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 30 kDa band.

Product Information

Sequence Region	430-686
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>90%, 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 430-686 aa (Q03519) 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	Recombinant Human Antigen Peptide Transporter 2 (APT2/TAP2) Fragment (residues 430-686) is a high-purity protein designed for studying ATP-binding cassette (ABC) transporter function. This 257-amino acid fragment encompasses the critical ABC transporter domain, making it an ideal tool for investigating peptide antigen translocation, MHC class I loading mechanisms, and antigen presentation pathways in immunological research. Antigen Peptide Transporter 2 (TAP2) is an essential ATP-binding cassette transporter that forms a heterodimeric complex with TAP1 to mediate the unidirectional translocation of peptide antigens from the cytosol into the endoplasmic reticulum. This transport process, driven by ATP hydrolysis, enables loading of peptide antigens onto MHC class I molecules for antigen presentation to cytotoxic T cells. The full-length protein alternates between 'inward-facing' and 'outward-facing' conformations during its transport cycle, preferentially selecting intracellular peptides of 8-13 amino acids with specific hydrophobic and charged residue patterns. TAP2 localizes to the endoplasmic reticulum membrane as a multi-pass membrane protein, where its transmembrane segments form a pore structure. As a core component of the peptide loading complex, TAP2 serves as a molecular scaffold crucial for peptide-MHC I assembly and efficient antigen presentation, playing a fundamental role in adaptive immune responses.