Recombinant ERAP1 protein (His tag)

Catalog Number	541408
Synonyms	ARTS-1; Adipocyte-derived leucine aminopeptidase; A-LAP; Aminopeptidase PILS; Puromycin-insensitive leucyl-specific aminopeptidase; PILS-AP; Type 1 tumor necrosis factor receptor shedding aminopeptidase regulator
Species	Human
Expression System	E. coli
Accession	Q9NZ08
Molecular Weight	Predictes a molecular mass of 51.50 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 52 kDa band.

Product Information

Sequence Region	45-485
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>89%, 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 45-485 aa (Q9NZ08) 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 Endoplasmic Reticulum Aminopeptidase 1 (ERAP1) Fragment (residues 45-485) is a highly purified protein designed for structural and biochemical studies. This 441-amino acid fragment represents a stable, soluble unit of the enzyme, ideal for investigating its critical role in MHC class I antigen presentation and peptide trimming mechanisms. Endoplasmic reticulum aminopeptidase 1 (ERAP1) is a membrane-bound aminopeptidase localized to the endoplasmic reticulum membrane as a single-pass type II membrane protein. It plays a central role in peptide trimming, a essential process for generating most HLA class I-binding peptides by customizing longer precursor peptides to the correct length required for MHC class I presentation. The enzyme strongly prefers substrates 9-16 residues long, rapidly degrading 13-mer peptides to 9-mers before stopping, with preferential hydrolysis of leucine residues and peptides containing hydrophobic C-termini. ERAP1 may also contribute to blood pressure regulation through inactivation of angiotensin II and generation of bradykinin in the kidney, and potentially participates in peptide hormone inactivation.