Recombinant PGPI protein (His tag)

Catalog Number	541390
Synonyms	5-oxoprolyl-peptidase; Pyroglutamyl aminopeptidase I; PAP-I; Pyroglutamyl-peptidase I; PGP-I; Pyrrolidone-carboxylate peptidase
Species	Human
Expression System	E. coli
Accession	Q9NXJ5
Molecular Weight	Predictes a molecular mass of 24.79 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 25 kDa band.

Product Information

Sequence Region	1-209
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 1-209 aa (Q9NXJ5) 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	This product is a recombinant fragment of human Pyroglutamyl-peptidase 1 (EC 3.4.19.3), a 5-oxoprolyl-peptidase enzyme that specifically removes 5-oxoproline from various penultimate amino acid residues. The fragment spans residues 1-209 and has been computationally optimized for stability and solubility, making it ideal for structural studies and biochemical assays. Pyroglutamyl-peptidase 1, encoded by the gene PGPEP1, is a cytoplasmic enzyme that catalyzes the removal of 5-oxoproline (pyroglutamate) from the N-terminus of peptides and proteins, excluding cases where the penultimate residue is L-proline. This activity is essential for protein maturation and degradation processes, influencing cellular homeostasis. The enzyme's cytoplasmic localization underscores its role in intracellular peptide processing, with implications for understanding post-translational modifications and metabolic pathways in human biology.