Recombinant DPEP3 protein (His tag)

Catalog Number	549094
Species	Human
Expression System	E. coli
Accession	Q9H4B8
Molecular Weight	Predictes a molecular mass of 41.81 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 42 kDa band.

Product Information

Sequence Region	77-438
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>88%, 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 77-438 aa (Q9H4B8) 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 Dipeptidase 3 (DPEP3) Fragment (residues 77-438) is a 362-amino acid protein fragment engineered for stability and solubility, ideal for structural biology and functional studies. This fragment represents a key soluble domain of DPEP3, which lacks canonical dipeptidase activity due to unique catalytic site variations, offering researchers a valuable tool to explore its non-enzymatic roles and membrane-associated properties. Dipeptidase 3 (DPEP3), encoded by the DPEP3 gene in Homo sapiens, is a membrane-anchored protein localized via a GPI-anchor. Unlike its homologs DPEP1 and DPEP2, DPEP3 lacks dipeptidase activity and cannot hydrolyze substrates such as cystinyl-bis-glycine, leukotriene D4, or the antibiotic imipenem. This functional absence is attributed to critical amino acid substitutions: an asparagine at position 359 (replacing aspartate) impairs acid/base catalysis, while a tyrosine at position 269 (instead of histidine) reduces zinc affinity and may cause steric hindrance. These features suggest DPEP3 may have evolved distinct, non-enzymatic roles, making it an intriguing subject for research into atypical dipeptidase family functions.