Recombinant BPI protein (His tag)

Catalog Number	544440
Synonyms	BPI; CAP 57
Species	Human
Expression System	E. coli
Accession	P17213
Molecular Weight	Predictes a molecular mass of 52.32 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 52 kDa band.

Product Information

Sequence Region	32-487
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 32-487 aa (P17213) 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 Bactericidal Permeability-Increasing Protein (BPI) Fragment (32-487) is a high-purity, stable protein fragment designed for structural and biochemical research. This soluble unit retains key functional domains, offering researchers a reliable tool to study BPI's potent antibacterial activity against Gram-negative bacteria. Bactericidal Permeability-Increasing Protein (BPI), also known as CAP 57, is a human-derived protein with specific cytotoxic activity against Gram-negative bacteria. Its function is mediated by the highly basic N-terminal region, which exhibits strong affinity for lipopolysaccharides (LPS) unique to Gram-negative bacterial outer membranes. This interaction underlies BPI's antibacterial effects, demonstrated against pathogens such as Pseudomonas aeruginosa, where activity is inhibited by bacterial LPS. BPI is naturally found in polymorphonuclear leukocytes (PMNs), where it localizes to cytoplasmic granule membranes and can be secreted, playing a critical role in innate immune defense against Gram-negative infections. The provided recombinant fragment (residues 32-487) encompasses the functional domain responsible for LPS binding and bactericidal activity, making it ideal for investigating mechanisms of bacterial recognition and host-pathogen interactions.