Recombinant CAP7 protein (His tag)

Catalog Number	539828
Synonyms	Cationic antimicrobial protein CAP37; Heparin-binding protein; HBP; hHBP
Species	Human
Expression System	E. coli
Accession	P20160
Molecular Weight	Predictes a molecular mass of 25.71 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 26 kDa band.

Product Information

Sequence Region	27-248
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 27-248 aa (P20160) 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 Azurocidin (CAP37/HBP) Fragment (27-248) is a high-purity protein designed for studying the Peptidase S1 domain. This fragment retains key antibacterial and chemotactic functions, making it an essential tool for inflammation and innate immunity research. Azurocidin, also known as Cationic Antimicrobial Protein CAP37 or Heparin-Binding Protein (HBP), is a neutrophil granule-derived glycoprotein with dual roles in host defense. It exhibits potent antibacterial activity specifically against Gram-negative bacteria through binding to lipopolysaccharides, while also serving as a monocyte- and fibroblast-specific chemotactic factor that mediates secondary wave inflammation. The protein localizes to azurophil granules in neutrophil granulocytes, where it is stored as part of the neutrophil's antimicrobial arsenal. Its activity against Pseudomonas aeruginosa and synergistic antibacterial effects with elastase or cathepsin G against certain bacterial strains highlight its importance in innate immune responses. The fragment encompassing residues 27-248 contains the complete Peptidase S1 domain, preserving the functional regions critical for its biological activities.