Recombinant CMGA protein (His tag)

Catalog Number	537501
Synonyms	CgA; Pituitary secretory protein I; SP-I; Vasostatin I; Vasostatin II; SL21
Species	Human
Expression System	E. coli
Accession	P10645
Molecular Weight	Predictes a molecular mass of 12.18 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 13 kDa band.

Product Information

Sequence Region	19-111
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 19-111 aa (P10645) 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 Chromogranin-A (CgA) Fragment (residues 19-111) is a highly purified, stable protein fragment designed for structural and biochemical studies. This 93-amino acid segment, derived from the full-length CgA protein, offers a soluble and functional unit ideal for investigating the protein's roles in hormone regulation, antimicrobial activity, and cardiovascular function. Chromogranin-A (CgA) is a multifunctional secretory protein expressed in endocrine and neuroendocrine cells, playing critical roles in hormone secretion and cellular signaling. The full-length protein is cleaved into numerous bioactive peptides, including Pancreastatin, which strongly inhibits glucose-induced insulin release, and Catestatin, a non-competitive nicotinic cholinergic antagonist that inhibits catecholamine release, exhibits antibacterial activity against both Gram-positive and Gram-negative bacteria, induces mast cell migration and degranulation, and acts as a potent free radical scavenger. Additionally, the Serpinin fragment regulates granule biogenesis by up-regulating protease nexin 1 transcription via a cAMP-PKA-SP1 pathway, promoting secretory granule formation. CgA is localized to cytoplasmic secretory vesicles and is secreted into the extracellular space, where its derived peptides contribute to the regulation of cardiac function and blood pressure. The provided fragment (residues 19-111) represents a stable, soluble region selected for experimental applications, enabling focused studies on CgA's diverse physiological roles.