Recombinant CO3 protein (His tag)

Catalog Number	546635
Synonyms	C3 and PZP-like alpha-2-macroglobulin domain-containing protein 1; C3bc; ASP; C3adesArg; Complement C3b-alpha' chain
Species	Human
Expression System	E. coli
Accession	P01024
Molecular Weight	Predictes a molecular mass of 40.57 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 41 kDa band.

Product Information

Sequence Region	955-1303
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 955-1303 aa (P01024) 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 Complement C3 Fragment (residues 955-1303) is a high-purity, stable protein fragment derived from the critical immune regulator Complement C3. This 349-amino acid fragment is engineered for structural and biochemical studies, offering researchers a soluble and functional unit to investigate the intricate mechanisms of complement system activation and immune response modulation. Complement C3 (UniProt ID: P01024) serves as the central component of the classical, alternative, lectin, and GZMK complement pathways, forming a cascade that facilitates pathogen phagocytosis and enhances adaptive immune signaling. Following cleavage, its derivatives perform specialized roles: C3b opsonizes pathogens and forms C5 convertase to activate downstream complement components; C3a anaphylatoxin acts as a potent inflammatory mediator and chemoattractant; and the acylation stimulating protein (ASP/C3adesArg) regulates lipid metabolism by promoting triglyceride synthesis and glucose uptake in adipocytes. The full-length protein is secreted and, in its C3b form, covalently attaches to pathogen surfaces via its reactive thioester domain. The selected fragment (residues 955-1303) encompasses key structural regions that contribute to C3's diverse functional repertoire, making it an ideal tool for dissecting complement pathway dynamics and immune-related processes.