Recombinant C1QA protein (His tag)

Catalog Number	537415
Species	Human
Expression System	E. coli
Accession	P02745
Molecular Weight	Predictes a molecular mass of 19.46 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 19 kDa band.

Product Information

Sequence Region	82-245
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>90%, 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 82-245 aa (P02745) 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 C1q subcomponent subunit A (C1QA) Fragment (residues 82-245) - a high-purity protein fragment specifically engineered to contain the complete C1q functional domain. This product enables focused investigation of the classical complement pathway initiation mechanism, providing researchers with a precise tool for studying immunoglobulin recognition and complement system activation. Complement C1q subcomponent subunit A is a core component of the C1 complex that initiates the classical pathway of the complement system. This critical pathway leads to phagocytosis and breakdown of pathogens while strengthening adaptive immune responses. The full-length protein, together with C1QB and C1QC subunits, specifically recognizes and binds the Fc regions of IgG or IgM immunoglobulins complexed with antigens on pathogen surfaces. This immunoglobulin binding activates the proenzyme C1R, which then cleaves C1S, initiating the proteolytic cascade of the complement system. The C1Q subcomplex is activated by hexameric IgG-antigen complexes or pentameric IgM. Additionally, C1Q recognizes phosphatidylserine exposed on cells undergoing programmed cell death, potentially promoting complement system activation. The protein is secreted and functions at cell surfaces where it binds immunoglobulin-antigen complexes on pathogens.