Recombinant CASP5 protein (His tag)

Catalog Number	544686
Synonyms	CASP-5; ICE(rel)-III; Protease ICH-3; Protease TY
Species	Human
Expression System	E. coli
Accession	P51878
Molecular Weight	Predictes a molecular mass of 19.43 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 19 kDa band.

Product Information

Sequence Region	163-316
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>87%, 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 163-316 aa (P51878) 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 Caspase-5 (CASP-5) Fragment (residues 163-316) is a high-purity, stable protein unit derived from human Caspase-5, a key mediator of pyroptosis and inflammatory signaling. This 154-amino acid fragment is engineered for optimal solubility and structural integrity, making it ideal for biochemical assays, functional studies, and structural analysis. Caspase-5 is a thiol protease that plays a critical role in programmed cell death pathways, particularly pyroptosis—a lytic form of cell death triggered during inflammasome activation. It cleaves Gasdermin-D (GSDMD), releasing its N-terminal pore-forming domain to induce pyroptosis, and processes interleukin-18 (IL18) to promote inflammatory responses. Caspase-5 also cleaves cyclic GMP-AMP synthase (CGAS), potentially modulating antiviral innate immunity. These functions highlight its importance in immune regulation and cell death mechanisms, with implications for infectious diseases, autoinflammation, and cancer research.