Recombinant PSA3 protein (His tag)

Catalog Number	537635
Synonyms	Macropain subunit C8; Multicatalytic endopeptidase complex subunit C8; Proteasome component C8; Proteasome subunit alpha-7; alpha-7
Species	Human
Expression System	E. coli
Accession	P25788
Molecular Weight	Predictes a molecular mass of 29.96 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 33 kDa band.

Product Information

Sequence Region	2-255
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 2-255 aa (P25788) 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 Proteasome subunit alpha type-3 (PSMA3) fragment (residues 2-255) is a high-purity, stable protein designed for structural and biochemical studies. This fragment represents a soluble and functional unit of the 20S proteasome core complex, enabling detailed investigation of proteasome-mediated protein degradation pathways. The full-length Proteasome subunit alpha type-3 (PSMA3) is an essential component of the 20S core proteasome complex, which plays a central role in the proteolytic degradation of most intracellular proteins. By associating with regulatory particles such as 19S, PA200, or PA28, the 20S proteasome forms complexes like the 26S proteasome that mediate ATP-dependent degradation of ubiquitinated proteins and ubiquitin-independent proteolysis. These activities are critical for maintaining protein homeostasis, removing misfolded or damaged proteins, and generating MHC class I-presented antigenic peptides. PSMA3 also specifically binds to CDKN1A to facilitate its degradation and regulates membrane trafficking of the thromboxane A2 receptor isoform 2. The protein localizes to both the cytoplasm and nucleus, with nuclear translocation occurring through interaction with AKIRIN2 and the import receptor IPO9, highlighting its dynamic role in cellular protein quality control and regulatory processes.