Recombinant PSA1 protein (His tag)

Catalog Number	542222
Synonyms	30 kDa prosomal protein; PROS-30; Macropain subunit C2; Multicatalytic endopeptidase complex subunit C2; Proteasome component C2; Proteasome nu chain; Proteasome subunit alpha-6; alpha-6
Species	Human
Expression System	E. coli
Accession	P25786
Molecular Weight	Predictes a molecular mass of 31.21 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 32 kDa band.

Product Information

Sequence Region	1-263
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 1-263 aa (P25786) 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-1 (PSMA1) fragment (residues 1-263) is a high-purity, stable protein designed for structural and biochemical studies. This 30 kDa fragment retains key functional regions, offering researchers a reliable tool to investigate proteasome assembly and ubiquitin-dependent protein degradation pathways. Proteasome subunit alpha type-1, encoded by the PSMA1 gene, is an essential component of the 20S core proteasome complex responsible for the controlled degradation of intracellular proteins. It contributes to the 26S proteasome when associated with 19S regulatory particles, enabling ATP-dependent breakdown of ubiquitinated proteins to maintain cellular homeostasis. This degradation mechanism is critical for removing misfolded or damaged proteins and regulating protein turnover. The protein also participates in ubiquitin-independent degradation through associations with PA200 or PA28 regulators, supporting specialized processes like spermatogenesis and MHC class I antigen presentation. PSMA1 localizes to both the cytoplasm and nucleus, with nuclear translocation mediated by interaction with AKIRIN2 and import receptor IPO9, highlighting its dynamic role in cellular proteostasis.