Recombinant PSB7 protein (His tag)

Catalog Number	541088
Synonyms	Macropain chain Z; Multicatalytic endopeptidase complex chain Z; Proteasome subunit Z; Proteasome subunit beta-2; beta-2
Species	Human
Expression System	E. coli
Accession	Q99436
Molecular Weight	Predictes a molecular mass of 26.95 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 27 kDa band.

Product Information

Sequence Region	44-277
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>89%, 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 44-277 aa (Q99436) 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 beta type-7 (PSMB7) fragment (residues 44-277) is a high-quality protein product designed for structural and functional studies. This fragment encompasses a stable, soluble domain ideal for investigating the trypsin-like activity and biochemical properties of the 20S proteasome core complex. Proteasome subunit beta type-7, encoded by the PSMB7 gene, is an essential component of the 20S core proteasome complex, which mediates the proteolytic degradation of most intracellular proteins. As part of the 26S proteasome, it contributes to ATP-dependent degradation of ubiquitinated proteins, playing a critical role in maintaining protein homeostasis by eliminating misfolded, damaged, or unnecessary proteins. The protein also participates in ubiquitin-independent degradation pathways when associated with regulatory particles like PA200 or PA28, contributing to processes such as spermatogenesis and MHC class I antigen presentation. PSMB7 exhibits trypsin-like activity within the proteasome complex and localizes to both the cytoplasm and nucleus, with nuclear translocation facilitated by interaction with AKIRIN2 and the import receptor IPO9.