Recombinant PSB4 protein (His tag)

Catalog Number	542237
Synonyms	26 kDa prosomal protein; HsBPROS26; PROS-26; Macropain beta chain; Multicatalytic endopeptidase complex beta chain; Proteasome beta chain; Proteasome chain 3; HsN3; Proteasome subunit beta-7; beta-7
Species	Human
Expression System	E. coli
Accession	P28070
Molecular Weight	Predictes a molecular mass of 26.05 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 26 kDa band.

Product Information

Sequence Region	46-264
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 46-264 aa (P28070) 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 Proteasome subunit beta type-4 (PSMB4) fragment (residues 46-264) from Homo sapiens, a stable and soluble unit ideal for structural and biochemical studies. This fragment represents a key component of the 20S proteasome core complex, essential for intracellular protein degradation and cellular homeostasis. The full-length Proteasome subunit beta type-4 (PSMB4) is a non-catalytic 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 like 19S, PA200, or PA28, it forms complexes such as the 26S proteasome, enabling ATP-dependent degradation of ubiquitinated proteins and ubiquitin-independent proteolysis. These activities are critical for maintaining protein homeostasis by removing misfolded, damaged, or obsolete proteins, and are involved in pathways including spermatogenesis and MHC class I antigen presentation. Additionally, the PSMB4-containing SMAD1/OAZ1/PSMB4 complex mediates degradation of the repressor SNIP1. The protein is localized in both the cytoplasm and nucleus, with nuclear translocation facilitated by interaction with AKIRIN2 and the import receptor IPO9, highlighting its dynamic role in cellular regulation.