Recombinant human LMP7/PSMB8 protein

Catalog Number: ATGP1830

PRODUCT INFORMATION

Expression system
E.coli

Domain
73-276aa

UniProt No.
P28062

NCBI Accession No.
NP_683720.2

Alternative Names
proteasome (prosome macropain) subunit beta type 8, proteasome (prosome, macropain) subunit, beta type, 8, D6S216, D6S216E, LMP7, MGC1491, PSMB5i

PRODUCT SPECIFICATION

Molecular Weight
25.4 kDa (229aa)

Concentration
0.5mg/ml (determined by Bradford assay)

Formulation
Liquid in. 20mM Tris-HCl buffer (pH 8.0) containing 0.4M urea, 10% glycerol

Purity
> 85% by SDS-PAGE

Tag
His-Tag

Application
SDS-PAGE, Denatured

Storage Condition
Can be stored at +2C to +8C for 1 week. For long term storage, aliquot and store at -20C to -80C. Avoid repeated freezing and thawing cycles.

BACKGROUND

Description
PSMB8, also known as LMP7, belongs to the peptidase T1B family. The proteasome is a multicatalytic proteinase complex with a highly ordered ring-shaped 20S core structure. Proteasomes are distributed throughout eukaryotic cells at a high concentration and cleave peptides in an ATP/ubiquitin-dependent process in a non-lysosomal pathway. An essential function of a modified proteasome, the immunoproteasome, is the processing of class I MHC peptides. PSMB8 is located in the class II region of the MHC (major histocompatibility complex).

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Replacement of PSMB5 by PSMB8 increases the capacity of the immunoproteasome to cleave model peptides after hydrophobic and basic residues. This protein acts as a major component of interferon gamma-induced sensitivity. It plays a key role in apoptosis via the degradation of the apoptotic inhibitor MCL1. Recombinant human PSMB8 protein, fused to His-tag at N-terminus, was expressed in E. coli.

Amino acid Sequence

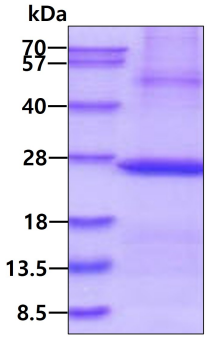
<MGSSHHHHHH SSGLVPRGSH MGSHM>TTTLA FKFQHGVIAA VDSRASAGSY ISALRVNKVI EINPYLLGTM SGCAADCQYW ERLLAKECRL YYLRNGERIS VSAASKLLSN MMCQYRGMGL SMGSMICGWD KKGPGLYYVD EHGTRLSGNM FSTGSGNTYA YGVMDSGYRP NLSPEEAYDL GRRAIAYATH RDSYSGGVVN MYHMKEDGWV KVESTDVSDL LHQYREANQ

General References

Muchamuel T., et al. (2009) Nat. Med. 15:781-787
Kitamura A., et al. (2011) J. Clin. Invest. 121:4150-4160

DATA

SDS-PAGE



3ug by SDS-PAGE under reducing condition and visualized by coomassie blue stain.