

# Recombinant Human Proteasome (prosome, macropain) Subunit, Alpha Type, 4, His-tagged

**Cat. No.** PSMA4-1565H    **Lot. No.** (See product label)

## SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product Overview</b> | Recombinant human PSMA4 protein, fused to His-tag at N-terminus, was expressed in E.coli and purified by using conventional chromatography.                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Species</b>          | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Source</b>           | E.coli                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Description</b>      | PSMA4, also known as proteasome subunit alpha type 4, is a member of the peptidase T1A family that is a 20S core alpha subunit. The proteasome is a multicatalytic proteinase complex with a highly ordered ring-shaped 20S core structure. The core structure is composed of 4 rings of 28 non-identical subunits; 2 rings are composed of 7 alpha subunits and 2 rings are composed of 7 beta subunits. It is distributed throughout eukaryotic cells at a high concentration and cleaves peptides in an ATP/ubiquitin-dependent process in a non-lysosomal pathway. |
| <b>Form</b>             | Liquid. In 20mM Tris-HCl buffer(pH 8.0) containing 20% glycerol, 1mM DTT, 0.1mM PMSF.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Molecular Weight</b> | 32.0 kDa (285aa), confirmed by MALDI-TOF.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Purity</b>           | >95% by SDS-PAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Concentration</b>    | 1 mg/ml (determined by Bradford assay)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

 Tel: 1-631-559-9269    1-516-512-3133

 Email: [info@creative-biomart.com](mailto:info@creative-biomart.com)     Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

|                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|---------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Sequences of amino acids</b> | <p>MGSSHHHHHH SSGLVPRGSH MGSMSRRYD SRTTIFSPEG RLYQVEYAME</p> <p>AIGHAGTCLG ILANDGVLLA AERRNIHKLL DEVFFSEKIYKLNEDMACSV</p> <p>AGITSDANVL TNELRLIAQR YLLQYQEPIP CEQLVTALCD IKQAYTQFGG</p> <p>KRPFQVSLLY IGWDKHYGFQ LYQSDPSGNYGGWKATCIGN NSAAAVSMLK</p> <p>QDYKEGEMTL KSALALAIKV LNKTM DVSKL SAEKVEIATL TRENGKTVIR</p> <p>VLKQKEVEQL IKKHEEEEEAKAEREKKEKEQ KEKDK</p>                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Storage</b>                  | Can be stored at +4°C short term (1-2 weeks). For long term storage, aliquot and store at -20°C or -70°C. Avoid repeated freezing and thawing cycles.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Pathways</b>                 | <p>APC/C-mediated degradation of cell cycle proteins; APC/C:Cdc20 mediated degradation of Securin; APC/C:Cdc20 mediated degradation of mitotic proteins; APC/C:Cdh1 mediated degradation of Cdc20 and other APC/C:Cdh1 targeted proteins in late mitosis/early G1; Activation of APC/C and APC/C:Cdc20 mediated degradation of mitotic proteins; Adaptive Immunity Signaling; Antigen processing: Ubiquitination&amp; Proteasome degradation; Apoptosis; Assembly of the pre-replicative complex; Autodegradation of Cdh1 by Cdh1:APC/C; Autodegradation of the E3 ubiquitin ligase COP1; CDK-mediated phosphorylation and removal of Cdc6; CDT1 association with the CDC6:ORC:origin complex; Cell Cycle Checkpoints; Cell Cycle</p> |
| <b>GENE INFORMATION</b>         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Gene Name</b>                | PSMA4 proteasome (prosome, macropain) subunit, alpha type, 4 [ Homo sapiens ]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Official Symbol</b>          | PSMA4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Synonyms</b>                 | <p>PSMA4; proteasome (prosome, macropain) subunit, alpha type, 4; HC9; PSC9; HsT17706; MGC12467; MGC24813; MGC111191; proteasome subunit alpha type-4; OTTHUMP00000185020; macropain subunit C9; proteasome subunit L; proteasome subunit HC9; proteasome component C9; multicatalyticendopeptidase complex</p>                                                                                                                                                                                                                                                                                                                                                                                                                       |

subunit C9; EC 3.4.25.1; Macropain subunit C9; Multicatalytic endopeptidase complex subunit C9; Proteasome component C9

**Gene ID** [5685](#)

**mRNA Refseq** [NM\\_001102667](#)

**Protein Refseq** [NP\\_001096137](#)

**MIM** [176846](#)

**UniProt ID** [P25789](#)

**Chromosome Location** [15q25.1](#)

**Function** peptidase activity; protein binding; threonine-type endopeptidase activity

**PDB rendering based on 1iru.**

