# Recombinant Human Proteasome (Prosome, Macropain) 26S Subunit, ATPase, 2, T7-tagged

**Cat. No.** PSMC2-3023H **Lot. No.** (See product label)

## SPECIFICATION

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| **Product Overview** | Recombinant Human PSMC2 protein was expressed in E.coli with T7-tag at the N-terminus. The molecular weight is 48503 Da. |
| **Species** | Human |
| **Source** | E.coli |
| **Description** | Proteasome (prosome, macropain) 26S subunit, ATPase, 2 is an enzyme that in humans is encoded by the PSMC2 gene. The 26S proteasome is a multicatalytic proteinase complex with a highly ordered structure composed of 2 complexes, a 20S core and a 19S regulator. The 20S core 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. The 19S regulator is composed of a base, which contains 6 ATPase subunits and 2 non-ATPase subunits, and a lid, which contains up to 10 non-ATPase subunits. 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. This gene encodes one of the ATPase subunits, a member of the triple-A family of ATPases which have a chaperone-like activity. This subunit has been shown to interact with several of the basal transcription factors so, in addition to participation in proteasome functions, this subunit may participate in the regulation of transcription. This subunit may also compete with PSMC3 for binding to the HIV tat protein to regulate the interaction |

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| | between the viral protein and the transcription complex. |
| **Sequences of amino acids** | 1-433 aa |
| **Formulation** | 10 mM Tris. pH 8.0. 0.1% Triton X-100. 0.002% NaN3. |
| **Purity** | 95% |

## GENE INFORMATION

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| **Gene Name** | PSMC2 proteasome (prosome, macropain) 26S subunit, ATPase, 2 [ Homo sapiens ] |
| **Synonyms** | S7; MSS1; MGC3004; Nbla10058; PSMC2; 26S protease regulatory subunit 7; OTTHUMP00000211710; protease 26S subunit 7; proteasome 26S subunit ATPase 2; proteasome 26S subunit, ATPase, 2; putative protein product of Nbla10058; 26S proteasome AAA-ATPase subunit RPT1; mammalian suppressor of sgv-1 of yeast |
| **Gene ID** | 5701 |
| **mRNA Refseq** | NM_002803 |
| **Protein Refseq** | NP_002794 |
| **MIM** | 154365 |
| **UniProt ID** | P35998 |
| **Chromosome Location** | 7q22.1-q22.3 |
| **Pathway** | Proteasome; Apoptosis; Cell Cycle Checkpoints; Cell Cycle, Mitotic;DNA Replication; |

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| | HIV Infection; Metabolism of amino acids and derivatives; Signaling by Wnt |
| **Function** | ATP binding; ATPase activity; hydrolase activity; nucleotide binding; protein binding |

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