# **PRODUCT INFORMATION**

**Expression system** E.coli

**Domain** 1-254aa

**UniProt No.** P61289

NCBI Accession No. NP\_005780.2

## **Alternative Names**

Proteasome activator subunit 3, 11S regulator complex subunit gamma, REG-gamma, Activator of multicatalytic protease subunit 3, Ki nuclear autoantigen, Proteasome activator 28 subunit gamma, PA28g, PA28gamma, Ki

# **PRODUCT SPECIFICATION**

### **Molecular Weight**

31.7 kDa (274aa) confirmed by MALDI-TOF

## Concentration

0.5mg/ml (determined by Bradford assay)

### Formulation

Liquid in. 20mM Tris-HCl buffer (pH 8.0) containing 2mM DTT, 40% glycerol, 200mM NaCl

**Purity** > 90% by SDS-PAGE

**Tag** His-Tag

Application SDS-PAGE

## **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

PSME3 (Proteasome activator complex subunit 3) belongs to the PA28 family. The 26S proteasome is a multicatalytic proteinase complex with a highly ordered structure composed of 2 complexes, a 20S core and a 19S regulator. Proteasomes are distributed throughout eukaryotic cells at a high concentration and cleave peptides in an ATP/ubiquitin-dependent process in a non-lysosomal pathway. PSME3 activates the trypsin-like catalytic subunit of the proteasome but inhibits the chymotrypsin-like and postglutamyl-preferring (PGPH)



subunits. PSEM3 facilitates the MDM2-p53/TP53 interaction which promotes ubiquitination- and MDM2dependent proteasomal degradation of p53/TP53, limiting its accumulation and resulting in inhibited apoptosis after DNA damage. Recombinant human PSME3 protein, fused to His-tag at N-terminus, was expressed in E. coli and purified by using conventional chromatography techniques.

#### **Amino acid Sequence**

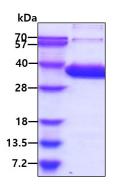
<MGSSHHHHHH SSGLVPRGSH> MASLLKVDQE VKLKVDSFRE RITSEAEDLV ANFFPKKLLE LDSFLKEPIL NIHDLTQIHS DMNLPVPDPI LLTNSHDGLD GPTYKKRRLD ECEEAFQGTK VFVMPNGMLK SNQQLVDIIE KVKPEIRLLI EKCNTVKMWV QLLIPRIEDG NNFGVSIQEE TVAELRTVES EAASYLDQIS RYYITRAKLV SKIAKYPHVE DYRRTVTEID EKEYISLRLI ISELRNQYVT LHDMILKNIE KIKRPRSSNA ETLY

#### **General References**

Wilk S., et al. (2000) Arch. Biochem. Biophys. 383:265-271 Zhang Z., et al. (2008) EMBO J. 27:852-864

## DATA

#### **SDS-PAGE**



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