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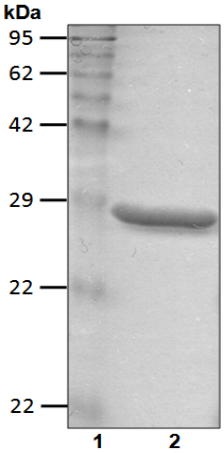
6xHis-PA28alpha

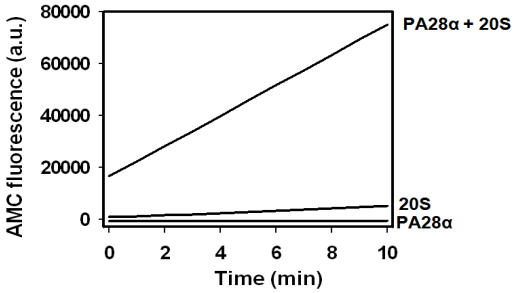
Cat. # A2100, A2101

Also Known as: PSME1;PA28A; IFI5111; REGalpha; PA28alpha;PA28-alpha;PA28 alpha
NCBI Reference: NM_006263
MW (no tag): 28.7 kDa
Species: Human
Source: Bacterial recombinant
Tag: 6xHis
Stock Buffer: 20 mM Tris, 150 mM NaCl, 2 mM βME, 10% Glycerol
Concentration: See tube label
Quality Assurance: ~95% by SDS-PAGE

Image



Coomassie-stained SDS-PAGE
Lane 1: Molecular weight markers
Lane 2: 5 µg purified 6xHis-PA28alpha



Activation of 5 nM 20S proteasome (Cat. # A1400) by 25 nM PA28α (Cat. # A2100), the proteasome activity was assayed by using 50 µM Suc-LLVY-AMC (Cat. # G1100) as the substrate. The AMC fluorescence was monitored by a plate reader with excitation and emission filters of 360±40 nm and 460±30 nm, respectively.

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Description: PA28 (also called the 11S regulatory complex) is another activator of the 20S proteasome, which assembles on either one or both ends of the 20S proteasome in an ATP-independent manner. PA28 can greatly enhance the peptidase activities of the 20S proteasome, but not for degradation of ubiquitinated proteins. The PA28 activator is a complex of two alternating homologous subunits, PA28α and PA28β, which assembles as a hexameric ring with an α3β3 stoichiometry. PA28α and PA28β are induced by interferon. Functionally, PA28 enhances the generation of class I peptides for antigen presentation. The third subunit, PA28γ, was recently identified in the nucleus. Recombinant PA28α and PA28β form a heptomeric ring; whereas PA28γ forms a hexameric ring. All of them can stimulate the peptidase activities of the 20S proteasome.

Storage: Store at -80°C; avoid multiple freeze-thaw cycles

Note: N/A

Literature:

1. Ma CP, *et al* . (1992) J Biol Chem 267(15), 10515 – 10523.
2. Whitby FG, *et al* . (2000) Nature 408(6808), 115 – 120.
3. Cascio P, *et al* . (2002) The EMO Journal 21, 2636 – 2645.
4. Sijts EJAM, *et al* . (2011) Cell Mol Life Sci 68(9), 1491 – 1502.