
MATERIAL DATA SHEET

Recombinant Human PA28 Activator α Subunit

Cat. # E-381

The Proteasome Activator 28 (PA28) Regulatory Complex, also known as the 11S Regulatory (REG) Complex, is a ring-shaped, multimeric, ATP-independent regulatory complex that can bind to one or both ends of the 20S Proteasome or 20S Immunoproteasome (1,2). The PA28 Regulatory Complex stimulates the proteasome to hydrolyze small peptides, but not ubiquitinated proteins, for the production of peptides for MHC class I antigen presentation (3-7). Three PA28 Regulatory Complex subunits, alpha, beta, and gamma, have been identified and can oligomerize to form the PA28 Regulatory Complex (8-10). While the expression of the PA28 alpha and beta subunits are induced by IFN-gamma, the PA28 gamma subunit is not significantly affected (11,12). *In vivo*, PA28 alpha forms hetero-heptamers or -hexamers with PA28 beta (13-15). PA28 alpha can also form active homo-heptamers *in vitro* and can be used to activate the 20S Proteasome (3,16). In addition to regulating production of MHC class I antigens, PA28 alpha may protect against oxidative stress (17).

Product Information

Quantity:	100 μ g
MW:	29 kDa
Source:	<i>E. coli</i> -derived Accession # Q06323
Stock:	X mg/ml (X μ M) in 50 mM Hepes, pH 8.0, 200 mM NaCl, 1mM DTT.
Purity:	>95%, by SDS-PAGE under reducing conditions and visualized by Colloidal Coomassie® Blue stain.

Use & Storage

Use:	Recombinant Human PA28 Activator α Subunit is ideal for the activation of latent 20S Proteasome complexes. Reaction conditions will need to be optimized for each specific application. Initially, we recommend a 5- to 15-fold molar excess of Recombinant Human PA28 Activator α Subunit relative to 20S Proteasome.
Storage:	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none">• 12 months from date of receipt, -70 °C as supplied.• 3 months, -70 °C under sterile conditions after opening.

Literature

References:

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