PA28 alpha (PSME1) - human

Cat. No. SBB-PP0080
Lot. No. 190870080

South Bay Bío

PA28 alpha - human

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 immuno-proteasome, is the processing of class I MHC peptides. The immuno-proteasome contains an alternate regulator, referred to as the 11S regulator or PA28 that replaces the 19S regulator. PA28 alpha is implicated in immuno-proteasome assembly and required for efficient antigen processing. The PA28 activator complex enhances the generation of class I binding peptides by altering the cleavage pattern of the proteasome. The PA28 complex is expressed constitutively in antigen-presenting cells, its expression is up-regulated by interferon-gamma, and it appears to be involved in the presentation of endogenous antigens by MHC class I molecules. The PA28 alpha protein was recombinantly expressed in *E. coli*.

References

1. Belich, M. P *et al*, J.: Proteasome components with reciprocal expression to that of the MHC-encoded LMP proteins. Curr. Biol. 4: 769-776, 1994.
2. Honore, B. *et al*: Interferon-gamma up-regulates a unique set of proteins in human keratinocytes: molecular cloning and expression of the cDNA encoding the RGD-sequence-containing protein IGUP I5111. Europ. J. Biochem. 218: 421-430, 1993.
3. McCusker, D. *et al*: Genetic relationships of the genes encoding the human proteasome beta subunits and the proteasome PA28 complex. Genomics 45: 362-367, 1997.
4. McCusker, D.; Wilson, M.; Trowsdale, J.: Organization of the genes encoding the human proteasome activators PA28-alpha and beta. Immunogenetics 49: 438-445, 1999.

Product Information

Quantity: 100 µg Molecular Weight: 28.7 kDa

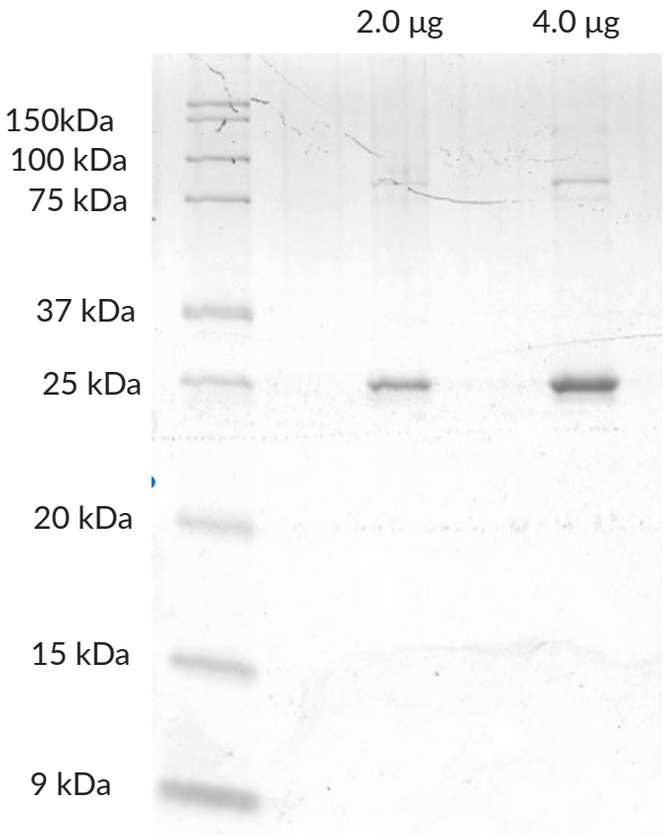
Concentration: 70 µM, 2.25 mg/mL

Purity: >97% by SDS-PAGE

Storage Buffer: 50 mM HEPES pH 8.0, 200 mM NaCl, 0.5 mM TCEP

Storage: -80C, Avoid multiple freeze/thaw

Quality Control and Performance Data



PA28 alpha: SDS-PAGE. From left to right, increasing amounts of protein loaded onto a 4-20% SDS-PAGE gel, stained with Coomassie brillant blue. Purity is > 97%.

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