Lot # XXXXX

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MATERIAL DATA SHEET

20S Immunoproteasome, *human*
Cat. # E-370

The 20S Immunoproteasome is a modified form of the constitutively active 20S Proteasome core particle and is the catalytic subunit of the multi-complex Immunoproteasome. The structure of the 20S Immunoproteasome is similar to the 20S Proteasome, which is composed of 28 non-identical subunits arranged into four stacked rings. However, during 20S Immunoproteasome assembly, the three catalytic beta subunits, β1, β2, and β5, in the two interior rings of the 20S Proteasome are replaced by three IFNγ-inducible catalytic subunits: β1i/LMP2, β2i/MECL-1, and β5i/LMP7. The 20S Immunoproteasome is commonly associated with the 19S, PA28 α/β, or the PA28γ regulatory complexes. 20S Immunoproteasome expression is enriched in antigen presenting cells of the immune system where the 20S Immunoproteasome selectively degrades intracellular proteins in a manner that optimizes the generation of peptides for MHC class I antigen presentation. Selective inhibition of 20S Immunoproteasome proteolytic activity using small molecule inhibitors is being examined for therapeutic intervention in cancer and inflammatory diseases. This protein has been purified from human peripheral blood mononuclear cells, which have been screened and are negative for hepatitis B surface antigen, antibodies to hepatitis C virus, HIV type 1 antigens, and antibodies to HIV type 1 and 2.

Product Information	
Quantity:	25 µg
Stock:	X mg/ml (X µM) in 50 mM HEPES pH 7.6, 100 mM NaCl, 1 mM DTT.
MW:	700 kDa
Purity:	> 95% by SDS-PAGE under reducing conditions and visualized by Colloidal Coomassie Blue stain.

Use & Storage	
Use:	The human 20S Immunoproteasome is able to degrade substrates in an ATP-independent manner. It can be activated chemically with SDS (0.035%) or by the addition of PA28. Reaction conditions will need to be optimized for each specific application. We recommend an initial 20S Proteasome concentration of 0.5-5 nM.
Storage:	Store at -80°C. Avoid multiple freeze/thaw cycles.

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