Active Native Cynomolgus monkey 20S Immunoproteasome protein

Cat. No. 20S Immunoproteasome-224C **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Native Cynomolgus monkey 20S Immunoproteasome was purified from Cynomolgus monkey spleen.
Species	Cynomolgus
Source	Cynomolgus monkey spleen
Description	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 in four stacked rings. During 20S Immunoproteasome assembly in humans, three catalytic beta subunits (beta 1, beta 2, and beta 5) in the two interior rings of the 20S Proteasome are replaced by three IFN gamma -inducible subunits: beta 1i/LMP2(PSMB9), beta 2i/MECL-1 (PSMB10), and beta 5i/LMP7 (PSMB8). In their mature forms these subunits are highly conserved in C. fascicularis, with identities of 97%, 91%, and 98%, respectively. The 20S Immunoproteasome is commonly associated with the 19S, PA28 alpha / beta or PA28 gamma regulatory complexes. 20S Immunoproteasome expression is elevated in antigen presenting cells of the immune system where the Proteasome activity selectively degrades intacellular 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 extensively examined for therapeutic intervention in

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	cancer and inflammatory diseases. This protein has been purified from spleen cells collected from the crab-eating macaque, Cynomolgus fascicularis (cyno).
Form	X mg/ml (X μM) in 50 mM HEPES pH 7.6, 100 mM NaCl, 1 mM DTT
Bio-activity	The 20S Proteasome is able to degrade substrates in an ATP-independent manner. It can be activated chemically with SDS (0.035%, final) 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 - 5.0 nM.
Molecular Mass	700 kDa
Purity	>90%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. 12 months from date of receipt, -70 centigrade as supplied. 3 months, -70 centigrade under sterile conditions after opening.

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