

MATERIAL DATA SHEET

19S Proteasome, FLAG-UCHL5 (C88A), human recombinant Cat. # E-367

The 19S Proteasome, also known as PA700, is a multi-subunit regulatory particle that associates with the 20S Proteasome core particle to form the 26S Proteasome. The 19S Proteasome can cap the 20S Proteasome at one or both ends and regulate substrate access to proteolytic activity in an ATP-dependent manner by modulating the conformation of the 20S Proteasome and facilitating substrate access to the 20S Proteasome catalytic core (1-3). The 19S Proteasome recognizes ubiquitinated proteins as well as non-ubiquitinated, misfolded proteins. It catalyzes substrate deubiquitination, unfolds substrate proteins, and threads them into the 20S Proteasome catalytic core (4,5). The 19S Proteasome consists of a base subcomplex and a lid subcomplex. The base subcomplex is composed of six AAA⁺ family members, two scaffolding proteins, and regulatory proteins involved in Ubiquitin recognition (6,7). The 19S Proteasome lid subcomplex contains eight subunits and one deubiquitinating enzyme, POH1/Rpn11 (6,7), present at stoichiometric levels. Two other deubiquitinating enzymes, UCHL5 (also known as Uch37) and USP14 are reversibly associated with the 19S Proteasome (8).

This 19S Proteasome preparation was purified with an inactive UCHL5 enzyme (Cys 88 to Ala mutation) and may be used for deubiquitination of target substrates via POH1 or USP14.

Product Information

Quantity:	25 µg
Stock:	X mg/ml (X µM) in 20 mM Hepes pH 7.5, 20 mM NaCl, 1 mM DTT, 20% glycerol.
MW:	700 kDa
Purity:	This product contains <2% 20S Proteasome contamination based on an <i>in vitro</i> activity assay using the 20S Proteasome substrate, Suc-LLVY-AMC (S-280). No detectable UCHL5 activity present by HA-Ubiquitin Vinyl Sulfone and SDS-PAGE Western Blot analysis.

Use & Storage

Storage:	Store at -80°C. Avoid multiple freeze/thaw cycles.
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Literature

References:	<ol style="list-style-type: none"> Adams, G.M. <i>et al.</i> (1998) <u>Biochemistry</u> 37:12927. Chu-Ping, M. <i>et al.</i> (1994) <u>J. Biol. Chem.</u> 269:3539. Kohler, A. <i>et al.</i> (2001) <u>Mol. Cell</u> 7:1143. Strickland, E. <i>et al.</i> (2000) <u>J. Biol. Chem.</u> 275:5565. Finley, D. (2009) <u>Annu. Rev. Biochem.</u> 78:477. Stadtmueller, B.M. & C.P. Hill (2011) <u>Mol. Cell</u> 41:8. Xie, Y. (2010) <u>J. Mol. Cell Biol.</u> 2:308. Lee, B.H. <i>et al.</i> (2010) <u>Nature</u> 467:179.
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