

**MATERIAL DATA SHEET****His<sub>6</sub>-S5a, human recombinant****Cat. # SP-400**

S5a (Rpn10), a component of the 19S regulatory complex, functions as a receptor by binding to and recognizing poly-ubiquitinated proteins destined for 26S proteasome degradation. The protein recognizes ubiquitin chains and ubiquitin protein conjugates via two UIM (ubiquitin-interacting motif) domains. S5a is a useful "universal" substrate to monitor E3 ligase activity, since it can be ubiquitinated by a wide variety of enzymes from different classes (RING finger, U-box, CHIP and HECT enzyme classes). S5a can be modified by E3 enzymes which catalyze homogeneous (K48 or K63) or heterogeneous Ub chain linkages. The mechanism of S5a ubiquitination is dependent on its association with Ub or Ub chains via its UIM domains, which brings it into close proximity with the E3 allowing for modification. The recognition of S5a by E3s is thus atypical and non-selective since these enzymes do not bind directly to degrons (degradation motifs) within this protein.

**Product Information**

<b>Quantity:</b>	100 µg
<b>Stock:</b>	X mg/ml (X µM) in 50 mM HEPES pH 8.0, 250 mM NaCl, 5% glycerol, 1 mM DTT. Actual concentration varies with lot number.
<b>MW:</b>	43 kDa
<b>Purity:</b>	> 95% by SDS-PAGE

**Use & Storage**

<b>Use:</b>	Typical concentrations for in vitro assays are 1-5 µM depending on experimental conditions and detection method.
<b>Storage:</b>	Store at -80°C. Avoid multiple freeze/thaw cycles.

**Literature**

<b>References:</b>	Bajorek M. and Glickman M.H. (2004) <i>Cell. Mol. Life Sci.</i> <b>61</b> :1579-1588 Deveraux Q., <i>et al.</i> (1994) <i>J. Biol. Chem.</i> <b>269</b> : 7059-7061 Ferrell K., <i>et al.</i> (1996) <i>FEBS. Lett.</i> <b>381</b> : 143-148 Mayor T., <i>et al.</i> (2005) <i>Mol. Cell. Proteomics.</i> <b>4</b> :741-751. Ventadour S., <i>et al.</i> (2007) <i>J. Biol. Chem.</i> <b>282</b> : 5302-5309 Verma R, <i>et al.</i> (2004) <i>Cell.</i> <b>118</b> :99-110
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