

MATERIAL DATA SHEET**Ubiquitin Mutant F4A, human recombinant****Cat. # UM-F4A**

Ubiquitin has two functional surfaces which are critical for various signaling processes. The hydrophobic patch (Leu⁸, Ile⁴⁴ and Val⁷⁰) is important for binding to the proteasome, UIM (ubiquitin interacting motif) and UBA (ubiquitin associated) domains. This multifunctional surface thus influences many ubiquitination and deubiquitination reactions. The other surface defined by Phe⁴ is required specifically for non-proteasome-dependent functions such as endocytosis and internalization, which often involves mono-ubiquitination. It is thought that Phe⁴ may be involved in specific protein-protein interactions that facilitate endocytosis. In addition, Ile⁴⁴ forms a di-leucine signal with Leu⁴³ that may be involved in mediating endocytosis of substrate proteins that are mono-ubiquitinated. Ubiquitin F4A can form an E1-catalyzed active thioester at the C-terminus allowing the molecule to be transferred to the lysines of substrate proteins.

Product Information

Quantity:	1 mg, lyophilized powder
MW:	8.5 kDa
Solubility:	Soluble and stable in aqueous buffers up to 5 mg/ml.
Purity:	> 95% by SDS-PAGE

Use & Storage

Use:	Typical concentrations for non rate-limiting support of <i>in vitro</i> conjugation reactions range from 200 μ M-1 mM depending on experimental conditions.
Storage:	Store at -20°C after solubilization in desired buffer. Avoid freeze/thaw cycles.

Literature

References:	Beal R., <i>et al.</i> (1996) <u>Proc. Natl. Acad. Sci. USA.</u> 93 :861-866
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	Kirkin V. and Dikic I. (2007) <u>Curr. Opin. Cell. Biol.</u> 19 :199-205
	Shih S.C., <i>et al.</i> (2000) <u>EMBO J.</u> 19 :187-198
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