Lot # XXXXX

BostonBiochem

MATERIAL DATA SHEET

I44A Ubiquitin, *human recombinant*
Cat. # UM-I44A

Ile^{44} is a surface hydrophobic residue that is important for poly-ubiquitin chain interaction and recognition by the 26S proteasome and other enzymes involved in ubiquitination. Together with Leu^{8} and Val^{70}, this isoleucine forms the important hydrophobic patch critical for proteasomal degradation. Ile^{44} also forms a di-leucine signal with Leu^{43} that may be involved in mediating endocytosis of substrate proteins that are mono-ubiquitinated. However, this di-leucine signal is not the sole determinant for endocytic internalization. Ubiquitin I44A 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 *in vitro* conjugation reactions range from 200 µM-1 mM depending on experimental conditions.
Storage:	Store at -20°C after solubilization in desired buffer. Avoid multiple freeze/thaw cycles.

Literature

References:

Beal R., *et al.* (1996) Proc. Natl. Acad. Sci. USA. **93**:861-866
Beal R., *et al.* (1998) Biochemistry. **37**:2925-2934
Lam Y., *et al.* (1997) J. Biol. Chem. **272**:28438-28446
Nakatsu F., *et al.* (2000) J. Biol. Chem. **275**:26213-26219
Marks M.S., *et al.* (1997) Trends Cell. Biol. **7**:124-128
Mueller T.D. and Feignon J.(2002) J. Mol. Biol. **319**:1243-1255
Shih S.C., *et al.* (2000) EMBO J. **19**:187-198
Sloper-Mould K.E., *et al.* (2001) J. Biol. Chem. **276**:30483-30489
Varadan R., *et al.* (2002) J. Mol. Biol. **324**:637-647

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