

MATERIAL DATA SHEET**Ubiquitin Mutant I44A, *human recombinant*****Cat. # UM-I44A**

Ile⁴⁴ 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 Leu⁸ and Val⁷⁰, this isoleucine forms the important hydrophobic patch critical for proteasomal degradation. Ile⁴⁴ also forms a di-leucine signal with Leu⁴³ 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 <i>in vitro</i> 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., <i>et al.</i> (1996) <u>Proc. Natl. Acad. Sci. USA.</u> 93 :861-866
	Beal R., <i>et al.</i> (1998) <u>Biochemistry.</u> 37 :2925-2934
	Lam Y., <i>et al.</i> (1997) <u>J. Biol. Chem.</u> 272 :28438-28446
	Nakatsu F., <i>et al.</i> (2000) <u>J. Biol. Chem.</u> 275 :26213-26219
	Marks M.S., <i>et al.</i> (1997) <u>Trends Cell. Biol.</u> 7 :124-128
	Mueller T.D. and Feignon J.(2002) <u>J. Mol. Biol.</u> 319 :1243-1255
	Shih S.C., <i>et al.</i> (2000) <u>EMBO J.</u> 19 :187-198
	Sloper-Mould K.E., <i>et al.</i> (2001) <u>J. Biol. Chem.</u> 276 :30483-30489
	Varadan R., <i>et al.</i> (2002) <u>J. Mol. Biol.</u> 324 :637-647

For Laboratory Research Use Only, Not For Use in Humans

840 Memorial Drive, Cambridge, MA 02139 Phone: 617-241-7072 FAX: 617-492-3565
www.bostonbiochem.com

The contents of this datasheet (unless otherwise noted) are Copyright © 2008 Boston Biochem, Inc. All rights reserved. Duplication in whole or in part is strictly prohibited without the express written consent of Boston Biochem, Inc. "Boston Biochem" is a Trademark of Boston Biochem, Inc., 840 Memorial Drive, Cambridge, MA 02139.