

Urm1 (N-24): sc-130288

BACKGROUND

Ubiquitin (Ub) is among the most phylogenetically conserved proteins known. The primary function of this small, 76 amino acid protein is to clear abnormal, foreign and improperly folded proteins by targeting them for degradation by the 26S proteasome. Many ubiquitin-like proteins function as post-translational protein modifiers, such as members of the SUMO protein family, however some ubiquitin-like proteins regulate protein-protein interactions and cell cycle events, thereby functioning outside of the traditional ubiquitination pathway. Urm1 (ubiquitin-related modifier 1 homolog) is a 101 amino acid protein that primarily functions in the post-translational modification of proteins by way of the urmylation pathway. In studies with *Saccharomyces cerevisiae*, it has been found that Urm1 covalently binds to its E1 activating enzyme, Uba4p, to conjugate alkyl hydroperoxide reductase (Ahp1). It is hypothesized that this complex may then play a role in the oxidative-stress response in mammals.

REFERENCES

- Hochstrasser, M. 2000. Evolution and function of ubiquitin-like protein-conjugation systems. *Nat. Cell Biol.* 2: E153-E157.
- Hochstrasser, M. 2000. Biochemistry. All in the ubiquitin family. *Science* 289: 563-564.
- Goehring, A.S., Rivers, D.M. and Sprague, G.F. 2003. Attachment of the ubiquitin-related protein Urm1p to the antioxidant protein Ahp1p. *Eukaryotic Cell* 2: 930-936.
- Goehring, A.S., Rivers, D.M. and Sprague, G.F. 2003. Urmylation: a ubiquitin-like pathway that functions during invasive growth and budding in yeast. *Mol. Biol. Cell* 14: 4329-4341.
- Yang, X.Y., Ren, C.P., Wang, L., Li, H., Jiang, C.J., Zhang, H.B., Zhao, M. and Yao, K.T. 2005. Identification of differentially expressed genes in metastatic and non-metastatic nasopharyngeal carcinoma cells by suppression subtractive hybridization. *Cell. Oncol.* 27: 215-223.

CHROMOSOMAL LOCATION

Genetic locus: URM1 (human) mapping to 9q34.11.

SOURCE

Urm1 (N-24) is a purified rabbit polyclonal antibody raised against a peptide mapping near the N-terminus of Urm1 of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

APPLICATIONS

Urm1 (N-24) is recommended for detection of Urm1 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for Urm1 siRNA (h): sc-92844, Urm1 shRNA Plasmid (h): sc-92844-SH and Urm1 shRNA (h) Lentiviral Particles: sc-92844-V.

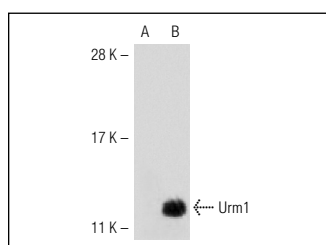
Molecular Weight of Urm1: 12 kDa.

Positive Controls: human lung carcinoma tissue.

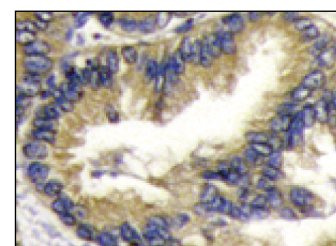
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



Urm1 (N-24): sc-130288. Western blot analysis of Urm1 expression in 293 showing nontransfected (A) and transfected (B) whole cell lysates.



Urm1 (N-24): sc-130288. Immunoperoxidase staining of formalin fixed, paraffin-embedded human lung carcinoma tissue showing cytoplasmic staining.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

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Try **Urm1 (A-7): sc-374485**, our highly recommended monoclonal alternative to Urm1 (N-24).