

# Ubr3 (5A10): sc-517094

## BACKGROUND

Ubiquitination is an important mechanism through which three classes of enzymes act in concert to target short-lived or abnormal proteins for destruction. The three classes of enzymes involved in ubiquitination are the ubiquitin-activating enzymes (E1s), the ubiquitin-conjugating enzymes (E2s) and the ubiquitin-protein ligases (E3s). Ubr3 (ubiquitin-protein ligase E3- $\alpha$ -3), also known as N-recogin-3 and zinc finger protein 650, is a 1,888 amino acid multi-pass membrane protein that contains one UBR-type zinc finger and one RING-type zinc finger. Participating in protein modification events within the N-end rule pathway, Ubr1 and Ubr2 function as E3 ubiquitin-protein ligase that recognize and bind proteins that contain destabilizing N-terminal residues, thereby leading to their ubiquitination and subsequent degradation. Unlike its family members, Ubr3 does not recognize N-end rule substrates, but is rather thought to recognize small compounds that modulate the targeting of its substrates. Adult mice that lack Ubr3 exhibit female-specific anosmia, suggesting that Ubr3 plays a regulatory role in sensory pathways like olfaction. There are four isoforms of Ubr3 that are produced as a result of alternative splicing events.

## REFERENCES

1. Varshavsky, A. 1997. The N-end rule pathway of protein degradation. *Genes Cells* 2: 13-28.
2. Kwon, Y.T., et al. 1998. The mouse and human genes encoding the recognition component of the N-end rule pathway. *Proc. Natl. Acad. Sci. USA* 95: 7898-7903.
3. Ardley, H.C. and Robinson, P.A. 2005. E3 ubiquitin ligases. *Essays Biochem.* 41: 15-30.
4. Tasaki, T., et al. 2005. A family of mammalian E3 ubiquitin ligases that contain the UBR box motif and recognize N-degrons. *Mol. Cell. Biol.* 25: 7120-7136.
5. Tasaki, T., et al. 2007. Biochemical and genetic studies of UBR3, a ubiquitin ligase with a function in olfactory and other sensory systems. *J. Biol. Chem.* 282: 18510-18520.
6. Tasaki, T. and Kwon, Y.T. 2007. The mammalian N-end rule pathway: new insights into its components and physiological roles. *Trends Biochem. Sci.* 32: 520-528.
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## CHROMOSOMAL LOCATION

Genetic locus: UBR3 (human) mapping to 2q31.1; Ubr3 (mouse) mapping to 2 C2.

## SOURCE

Ubr3 (5A10) is a mouse monoclonal antibody raised against amino acids 1-110 representing partial length Ubr3 of human origin.

## RESEARCH USE

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

## PRODUCT

Each vial contains 100  $\mu$ g IgG<sub>1</sub> kappa light chain in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

Ubr3 (5A10) is recommended for detection of Ubr3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

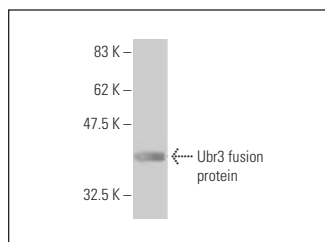
Suitable for use as control antibody for Ubr3 siRNA (h): sc-94795, Ubr3 siRNA (m): sc-155573, Ubr3 shRNA Plasmid (h): sc-94795-SH, Ubr3 shRNA Plasmid (m): sc-155573-SH, Ubr3 shRNA (h) Lentiviral Particles: sc-94795-V and Ubr3 shRNA (m) Lentiviral Particles: sc-155573-V.

Molecular Weight of Ubr3 isoform 1-4: 212/81/46/216 kDa.

## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), 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).

## DATA



Ubr3 (5A10): sc-517094. Western blot analysis of human recombinant Ubr3 fusion protein.

## STORAGE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.