

# Ubr1 (D-18): sc-5710

## BACKGROUND

The N-end rule relates the *in vivo* half-life of a protein to the composition of its N-terminal residues. The N-end rule pathway is part of the ubiquitin system, which involves a three-step mechanism. Proteins targeted for degradation are bound on their N-terminal residue by Ubr1 (also designated E3  $\alpha$  and N-recogin), which catalyzes the covalent attachment of ubiquitin to the protein substrate. Two zinc finger domains and the RING-H2 finger domain of Ubr1 are essential for substrate recognition. Ubr1 is located on mouse chromosome 2 and on human chromosome 15 in the syntenic region. Ubr1 is ubiquitously expressed in adult mouse, with the highest expression detected in skeletal muscle and heart. In mouse embryo, Ubr1 is primarily expressed in the branchial arches and in the tail and limb buds.

## REFERENCES

1. Gonen, H., et al. 1996. Isolation, characterization, and partial purification of a novel ubiquitin-protein ligase, E3. Targeting of protein substrates via multiple and distinct recognition signals and conjugating enzymes. *J. Biol. Chem.* 271: 302-310.
2. Varshavsky, A. 1997. The N-end rule pathway of protein degradation. *Genes Cells* 2: 13-28.
3. 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.
4. Kwon, Y.T., et al. 1999. Bivalent inhibitor of the N-end rule pathway. *J. Biol. Chem.* 274: 18135-18139.
5. Kwon, Y.T., et al. 2000. Altered activity, social behavior and spatial memory in mice lacking the NTAN1p amidase and the asparagine branch of the N-end rule pathway. *Mol. Cell. Biol.* 20: 4135-4148.

## CHROMOSOMAL LOCATION

Genetic locus: UBR1 (human) mapping to 15q15.2; Ubr1 (mouse) mapping to 2 E5.

## SOURCE

Ubr1 (D-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Ubr1 of mouse origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-5710 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## 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

Ubr1 (D-18) is recommended for detection of Ubr1 of mouse, rat and, to a lesser extent, 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)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Ubr1 siRNA (h): sc-106918, Ubr1 siRNA (m): sc-41688, Ubr1 shRNA Plasmid (h): sc-106918-SH, Ubr1 shRNA Plasmid (m): sc-41688-SH, Ubr1 shRNA (h) Lentiviral Particles: sc-106918-V and Ubr1 shRNA (m) Lentiviral Particles: sc-41688-V.

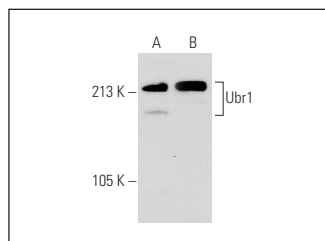
Molecular Weight of Ubr1: 230 kDa.

Positive Controls: L8 cell lysate: sc-3807.

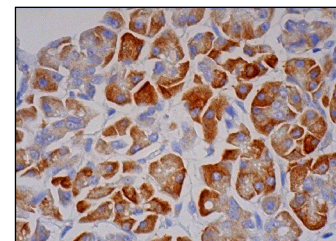
## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

## DATA



Ubr1 (D-18): sc-5710. Western blot analysis of Ubr1 expression in human umbilical tissue extract (A) and HeLa whole cell lysate (B).



Ubr1 (D-18): sc-5710. Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing cytoplasmic staining of exocrine glandular cells.

## PROTOCOLS

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