Ubr7 (G-23): sc-101977



The Power to Question

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). Ubr7 (ubiquitin protein ligase E3 component n-recognin 7), also known as C14orf130 or N-recognin-7, is a 425 amino acid protein that contains one UBR-type zinc finger and one PHD zinc finger. Participating in protein modification events within the N-end rule pathway, Ubr7 functions as an E3 ubiquitin-protein ligase that recognizes and binds proteins that contain destabilizing N-terminal residues, thereby leading to their ubiquitination and subsequent degradation.

REFERENCES

- Aasland, R., Gibson, T.J. and Stewart, A.F. 1995. The PHD finger: implications for chromatin-mediated transcriptional regulation. Trends Biochem. Sci. 20: 56-59.
- 2. Varshavsky, A. 1996. The N-end rule: functions, mysteries, uses. Proc. Natl. Acad. Sci. USA 93: 12142-12149.
- Xie, Y. and Varshavsky, A. 1999. The E2-E3 interaction in the N-end rule pathway: the RING-H2 finger of E3 is required for the synthesis of multiubiquitin chain. EMBO J. 18: 6832-6844.
- Tasaki, T., Mulder, L.C., Iwamatsu, A., Lee, M.J., Davydov, I.V., Varshavsky, A., Muesing, M. and Kwon, Y.T. 2005. A family of mammalian E3 ubiquitin ligases that contain the UBR box motif and recognize N-degrons. Mol. Cell. Biol. 25: 7120-7136.
- Lim, J., Hao, T., Shaw, C., Patel, A.J., Szabó, G., Rual, J.F., Fisk, C.J., Li, N., Smolyar, A., Hill, D.E., Barabási, A.L., Vidal, M. and Zoghbi, H.Y. 2006. A protein-protein interaction network for human inherited ataxias and disorders of Purkinje cell degeneration. Cell 125: 801-814.
- Tasaki, T., Sohr, R., Xia, Z., Hellweg, R., Hörtnagl, H., Varshavsky, A. and Kwon, Y.T. 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.
- Lee, M.J., Pal, K., Tasaki, T., Roy, S., Jiang, Y., An, J.Y., Banerjee, R. and Kwon, Y.T. 2008. Synthetic heterovalent inhibitors targeting recognition E3 components of the N-end rule pathway. Proc. Natl. Acad. Sci. USA 105: 100-105.

CHROMOSOMAL LOCATION

Genetic locus: C14orf130 (human) mapping to 14q32.12; Ubr7 (mouse) mapping to 12 E.

SOURCE

Ubr7 (G-23) is a purified rabbit polyclonal antibody raised against Ubr7 of human origin.

RESEARCH USE

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

PRODUCT

Each vial contains 100 μg IgG in 1.0 ml PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

APPLICATIONS

Ubr7 (G-23) is recommended for detection of Ubr7 of mouse, rat and 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), 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 Ubr7 siRNA (h): sc-92200, Ubr7 siRNA (m): sc-154876, Ubr7 shRNA Plasmid (h): sc-92200-SH, Ubr7 shRNA Plasmid (m): sc-154876-SH, Ubr7 shRNA (h) Lentiviral Particles: sc-92200-V and Ubr7 shRNA (m) Lentiviral Particles: sc-154876-V.

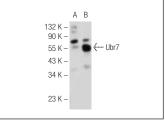
Molecular Weight of Ubr7: 48 kDa.

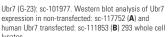
Positive Controls: Jurkat whole cell lysate: sc-2204.

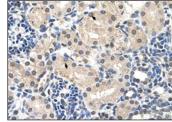
RECOMMENDED SECONDARY REAGENTS

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







Ubr7 (G-23): sc-101977. Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing nuclear and cytoplasmic staining.

STORAGE

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