TRIP12 (E-14): sc-138710

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BIOTECHNOLOGY

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BACKGROUND

Thyroid hormone receptors (TRs) are transcription factors that regulate the expression of specific genes in a hormone-dependent manner. TRIP12 (thyroid hormone receptor interactor 12) is a 1,992 amino acid E3 ubiquitin ligase involved in the human ubiquitin fusion degradation (UFD) pathway. TRIP12 also modulates the NEDD8 pathway, a series of steps implicated in signal transduction and cell cycle progression, where it influences APPBP1 degradation by catalyzing its ubiquitination. A member of the UPL family and K-HECT subfamily, TRIP12 contains one WWE domain and a single HECT (E6AP-type E3 ubiquitin-protein ligase) domain suggested to contain a non-covalent ubiquitin-binding site. Subject to post-translational phosphorylation upon DNA damage, TRIP12 expression is highest in testis and skeletal muscle, and has also been found in heart, spleen, thymus, ovary, placenta, kidney, prostate and peripheral blood leukocytes at lower levels.

REFERENCES

1. Nomura, N., et al. 1994. Prediction of the coding sequences of unidentified human genes. II. The coding sequences of 40 new genes (KIAA0041-KIAA0080) deduced by analysis of cDNA clones from human cell line KG-1. DNA Res. 1: 223-229.

2. Lee, J.W., et al. 1995. Two classes of proteins dependent on either the presence or absence of thyroid hormone for interaction with the thyroid hormone receptor. Mol. Endocrinol. 9: 243-254.

3. Beausoleil, S.A., et al. 2004. Large-scale characterization of HeLa cell nuclear phosphoproteins. Proc. Natl. Acad. Sci. USA 101: 12130-12135.

4. Park, Y., et al. 2008. TRIP12 functions as an E3 ubiquitin ligase of APP-BP1. Biochem. Biophys. Res. Commun. 374: 294-298.

5. Ohki, Y., et al. 2009. The mechanism of poly-NEDD8 chain formation *in vitro*. Biochem. Biophys. Res. Commun. 381: 443-447.

6. Park, Y., et al. 2009. The HECT domain of TRIP12 ubiquitinates substrates of the ubiquitin fusion degradation pathway. J. Biol. Chem. 284: 1540-1549.

7. Online Mendelian Inheritance in Man, OMIM™. 2009. Johns Hopkins University, Baltimore, MD. MIM Number: 604506. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/

CHROMOSOMAL LOCATION

Genetic locus: TRIP12 (human) mapping to 2q36.3; Trip12 (mouse) mapping to 1 C5.

SOURCE

TRIP12 (E-14) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping near the C-terminus of TRIP12 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-138710 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

TRIP12 (E-14) is recommended for detection of TRIP12 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:50-1:500), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:25, dilution range 1:25-1:250) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with other TRIP family members.

TRIP12 (E-14) is also recommended for detection of TRIP12 in additional species, including equine, canine, bovine and avian.

Suitable for use as control antibody for TRIP12 siRNA (h): sc-94390, TRIP12 siRNA (m): sc-154678, TRIP12 shRNA Plasmid (h): sc-94390-SH, TRIP12 shRNA Plasmid (m): sc-154678-SH, TRIP12 shRNA (h) Lentiviral Particles: sc-94390-V and TRIP12 shRNA (m) Lentiviral Particles: sc-154678-V.

Molecular Weight of TRIP12: 220 kDa.

Positive Controls: HL-60 nuclear extract: sc-2147, HeLa whole cell lysate: sc-2200 or Caki-1 cell lysate: sc-2224.

DATA
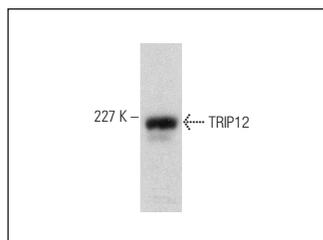
TRIP12 (E-14): sc-138710. Western blot analysis of TRIP12 expression in HL-60 nuclear extract.

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.

PROTOCOLS

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