

KLHL15 (Y-14): sc-168375

BACKGROUND

KLHL15 (kelch-like protein 15), also known as KIAA1677 or MGC126148, is a 604 amino acid protein that interacts with CUL-3. KLHL15 is believed to be a substrate-specific adapter of an E3 ubiquitin-protein ligase complex which regulates the ubiquitination, and subsequent proteasomal degradation, of target proteins. KLHL15 contains one BACK (BTB/Kelch associated) domain, five kelch repeats and one BTB domain. The BTB (broad complex, tramtrack and bric-a-brac) domain, also known as the POZ (poxvirus and zinc finger) domain, is an N-terminal homodimerization domain that contains multiple copies of kelch repeats and/or C₂H₂-type zinc fingers. Proteins that contain BTB domains are thought to be involved in transcriptional regulation via control of chromatin structure and function.

REFERENCES

1. Albagli, O., Dhordain, P., Deweindt, C., Lecocq, G. and Leprince, D. 1995. The BTB/POZ domain: a new protein-protein interaction motif common to DNA- and actin-binding proteins. *Cell Growth Differ.* 6: 1193-1198.
2. Nagase, T., Kikuno, R., Hattori, A., Kondo, Y., Okumura, K. and Ohara, O. 2000. Prediction of the coding sequences of unidentified human genes. XIX. The complete sequences of 100 new cDNA clones from brain which code for large proteins *in vitro*. *DNA Res.* 7: 347-355.
3. Melnick, A., Ahmad, K.F., Arai, S., Polinger, A., Ball, H., Borden, K.L., Carlile, G.W., Prive, G.G. and Licht, J.D. 2000. In-depth mutational analysis of the promyelocytic leukemia zinc finger BTB/POZ domain reveals motifs and residues required for biological and transcriptional functions. *Mol. Cell. Biol.* 20: 6550-6567.
4. Furukawa, M., He, Y.J., Borchers, C. and Xiong, Y. 2003. Targeting of protein ubiquitination by BTB-Cullin 3-Roc1 ubiquitin ligases. *Nat. Cell Biol.* 5: 1001-1007.
5. Yoshida, K. 2005. Identification and characterization of a novel kelch-like gene KLHL15 *in silico*. *Oncol. Rep.* 13: 1133-1137.
6. Sowa, M.E., Bennett, E.J., Gygi, S.P. and Harper, J.W. 2009. Defining the human deubiquitinating enzyme interaction landscape. *Cell* 138: 389-403.

CHROMOSOMAL LOCATION

Genetic locus: KLHL15 (human) mapping to Xp22.11; Klhl15 (mouse) mapping to X C3.

SOURCE

KLHL15 (Y-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of KLHL15 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-168375 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

KLHL15 (Y-14) is recommended for detection of KLHL15 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with other KLHL family members.

KLHL15 (Y-14) is also recommended for detection of KLHL15 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for KLHL15 siRNA (h): sc-91214, KLHL15 siRNA (m): sc-146516, KLHL15 shRNA Plasmid (h): sc-91214-SH, KLHL15 shRNA Plasmid (m): sc-146516-SH, KLHL15 shRNA (h) Lentiviral Particles: sc-91214-V and KLHL15 shRNA (m) Lentiviral Particles: sc-146516-V.

Molecular Weight of KLHL15: 70 kDa.

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) 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.

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 or our catalog for detailed protocols and support products.