

KLHL31 (G-12): sc-132314

BACKGROUND

KLHL31, also known as kelch-like protein 31, BTB and kelch domain-containing protein 6, kelch-like protein KLHL or kelch repeat and BTB domain-containing protein 1, is a 634 amino acid protein similar to the *Drosophila* kelch protein. KLHL31 is expressed strongly in skeletal muscle and weakly in heart. KLHL31 contains one BACK (BTB/kelch associated) domain, which may indicate a role in substrate orientation in E3 ligase complexes. KLHL31 also contains six kelch repeats and one BTB (POZ) 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

- 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.
- 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.
- Adams, J., Kelso, R. and Cooley, L. 2000. The kelch repeat superfamily of proteins: propellers of cell function. *Trends Cell Biol.* 10: 17-24.
- Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 610749. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Prag, S. and Adams, J.C. 2003. Molecular phylogeny of the kelch-repeat superfamily reveals an expansion of BTB/kelch proteins in animals. *BMC Bioinformatics* 4: 42.
- Geyer, R., Wee, S., Anderson, S., Yates, J. and Wolf, D.A. 2003. BTB/POZ domain proteins are putative substrate adaptors for cullin 3 ubiquitin ligases. *Mol. Cell* 12: 783-790.
- Stogios, P.J. and Privé, G.G. 2004. The BACK domain in BTB-kelch proteins. *Trends Biochem. Sci.* 29: 634-637.
- Wu, Y.L. and Gong, Z. 2004. A novel zebrafish kelchlike gene khl and its human ortholog KLHL display conserved expression patterns in skeletal and cardiac muscles. *Gene* 338: 75-83.

CHROMOSOMAL LOCATION

Genetic locus: KLHL31 (human) mapping to 6p12.1; Khl31 (mouse) mapping to 9 E1.

SOURCE

KLHL31 (G-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of KLHL31 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-132314 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

KLHL31 (G-12) is recommended for detection of KLHL31 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.

KLHL31 (G-12) is also recommended for detection of KLHL31 in additional species, including equine, canine, porcine and avian.

Suitable for use as control antibody for KLHL31 siRNA (h): sc-95308, KLHL31 siRNA (m): sc-146530, KLHL31 shRNA Plasmid (h): sc-95308-SH, KLHL31 shRNA Plasmid (m): sc-146530-SH, KLHL31 shRNA (h) Lentiviral Particles: sc-95308-V and KLHL31 shRNA (m) Lentiviral Particles: sc-146530-V.

Molecular Weight of KLHL31: 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.