

KLHL18 (N-14): sc-99487

BACKGROUND

KLHL18 (kelch-like protein 18) is a 574 amino acid protein that is related to the *Drosophila* kelch protein, which is required to maintain actin organization in ovarian ring canals. Mutations affecting Kelch function result in failure of Kelch to associate with the ring canals and subsequent female sterility. Human KLHL18 protein contains six kelch repeats, one BACK (BTB/Kelch associated) domain and one BTB (POZ) domain. The BTB (broad-complex, tramtrack and ric 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. There are two isoforms of KLHL18 that are produced as a result of alternative splicing events.

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.
- Robinson, D.N. and Cooley, L. 1997. *Drosophila* kelch is an oligomeric ring canal actin organizer. *J. Cell Biol.* 138: 799-810.
- 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.
- Kelso, R.J., Hudson, A.M. and Cooley, L. 2002. *Drosophila* Kelch regulates actin organization via Src64-dependent tyrosine phosphorylation. *J. Cell Biol.* 156: 703-713.
- 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.
- Gorjánác, M., Török, I., Pomozi, I., Garab, G., Szlanka, T., Kiss, I. and Mechler, B.M. 2006. Domains of Importin- α 2 required for ring canal assembly during *Drosophila* oogenesis. *J. Struct. Biol.* 154: 27-41.

CHROMOSOMAL LOCATION

Genetic locus: KLHL18 (human) mapping to 3p21.31; Klhl18 (mouse) mapping to 9 F2.

SOURCE

KLHL18 (N-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of KLHL18 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-99487 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

KLHL18 (N-14) is recommended for detection of KLHL18 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.

KLHL18 (N-14) is also recommended for detection of KLHL18 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for KLHL18 siRNA (h): sc-78030, KLHL18 siRNA (m): sc-146518, KLHL18 shRNA Plasmid (h): sc-78030-SH, KLHL18 shRNA Plasmid (m): sc-146518-SH, KLHL18 shRNA (h) Lentiviral Particles: sc-78030-V and KLHL18 shRNA (m) Lentiviral Particles: sc-146518-V.

Molecular Weight of KLHL18: 64/56 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.