

# KLHL12 (S-14): sc-162994

## BACKGROUND

KLHL12 (kelch-like protein 12), also known as C3IP1 (CUL3-interacting protein 1), DKIR or FLJ27152, is a 568 amino acid protein that is a component of an ubiquitin-protein E3 ligase complex, which includes at least CUL-3. KLHL12 is a substrate-specific adapter for the complex, which negatively regulates the Wnt signaling pathway via the targeted ubiquitination and subsequent proteolysis of Dvl-3. KLHL12 contains six Kelch repeats and one BTB (POZ) domain, which is required for interaction with CUL-3. KLHL12 has highest expression in testis, with lower levels found in the submandibular salivary gland. The gene that encodes KLHL12 maps to human chromosome 1q32.1.

## REFERENCES

1. Mai, A., et al. 2004. hDKIR, a human homologue of the *Drosophila* kelch protein, involved in a ring-like structure. *Exp. Cell Res.* 300: 72-83.
2. Lim, J., et al. 2006. A protein-protein interaction network for human inherited ataxias and disorders of Purkinje cell degeneration. *Cell* 125: 801-814.
3. Angers, S., et al. 2006. The KLHL12-Cullin-3 ubiquitin ligase negatively regulates the Wnt- $\beta$ -catenin pathway by targeting Dishevelled for degradation. *Nat. Cell Biol.* 8: 348-357.
4. Rondou, P., et al. 2008. BTB Protein KLHL12 targets the dopamine D4 receptor for ubiquitination by a Cul3-based E3 ligase. *J. Biol. Chem.* 283: 11083-11096.
5. Ehret, G.B., et al. 2009. Follow-up of a major linkage peak on chromosome 1 reveals suggestive QTLs associated with essential hypertension: GenNet study. *Eur. J. Hum. Genet.* 17: 1650-1657.

## CHROMOSOMAL LOCATION

Genetic locus: KLHL12 (human) mapping to 1q32.1; Klhl12 (mouse) mapping to 1 E4.

## SOURCE

KLHL12 (S-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of KLHL12 of human origin.

## PRODUCT

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

Blocking peptide available for competition studies, sc-162994 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

## APPLICATIONS

KLHL12 (S-14) is recommended for detection of KLHL12 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.

KLHL12 (S-14) is also recommended for detection of KLHL12 in additional species, including equine, canine, porcine and avian.

Suitable for use as control antibody for KLHL12 siRNA (h): sc-88759, KLHL12 siRNA (m): sc-146513, KLHL12 shRNA Plasmid (h): sc-88759-SH, KLHL12 shRNA Plasmid (m): sc-146513-SH, KLHL12 shRNA (h) Lentiviral Particles: sc-88759-V and KLHL12 shRNA (m) Lentiviral Particles: sc-146513-V.

Molecular Weight of KLHL12: 63 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.

## RESEARCH USE

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