

# KLHL4 (N-15): sc-138381

## BACKGROUND

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 C<sub>2</sub>H<sub>2</sub>-type zinc fingers. Proteins that contain BTB domains are thought to be involved in transcriptional regulation via control of chromatin structure and function. KLHL4 (kelch-like 4), also known as DKELCHL, is a 718 amino acid cytoplasmic protein that is expressed in adult fibroblasts and in a range of fetal tissues including tongue, palate and mandible. KLHL4 contains one BTB (POZ) domain and six kelch repeats. KLHL4 exists as four alternatively spliced isoforms and is encoded by a gene located on human chromosome Xq21.31.

## REFERENCES

1. Albagli, O., et al. 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. Adams, J., et al. 2000. The kelch repeat superfamily of proteins: propellers of cell function. *Trends Cell Biol.* 10: 17-24.
3. Braybrook, C., et al. 2001. Identification and characterization of KLHL4, a novel human homologue of the *Drosophila* kelch gene that maps within the X-linked cleft palate and ankyloglossia (CPX) critical region. *Genomics* 72: 128-136.
4. Braybrook, C., et al. 2001. Physical and transcriptional mapping of the X-linked cleft palate and ankyloglossia (CPX) critical region. *Hum. Genet.* 108: 537-545.
5. Online Mendelian Inheritance in Man, OMIM™. 2001. Johns Hopkins University, Baltimore, MD. MIM Number: 300348. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
6. Prag, S., et al. 2003. Molecular phylogeny of the kelch-repeat superfamily reveals an expansion of BTB/kelch proteins in animals. *BMC Bioinformatics* 4: 42.
7. Stogios, P.J., et al. 2004. The BACK domain in BTB-kelch proteins. *Trends Biochem. Sci.* 29: 634-637.

## CHROMOSOMAL LOCATION

Genetic locus: KLHL4 (human) mapping to Xq21.31.

## SOURCE

KLHL4 (N-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of KLHL4 of human origin.

## 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.

## 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-138381 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

KLHL4 (N-15) is recommended for detection of KLHL4 of human and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], 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.

Suitable for use as control antibody for KLHL4 siRNA (h): sc-90873, KLHL4 shRNA Plasmid (h): sc-90873-SH and KLHL4 shRNA (h) Lentiviral Particles: sc-90873-V.

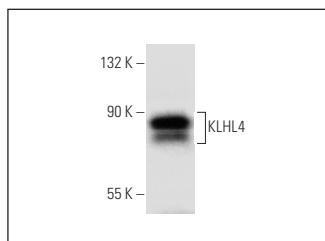
Molecular Weight of KLHL4 isoforms: 80/81 kDa.

Positive Controls: human placenta extract: sc-363772 or KNRK whole cell lysate: sc-2214.

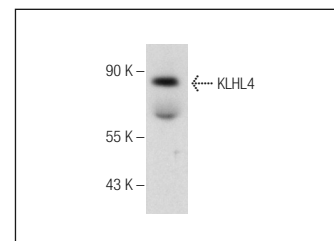
## RECOMMENDED SECONDARY REAGENTS

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

## DATA



KLHL4 (N-15): sc-138381. Western blot analysis of KLHL4 expression in KNRK whole cell lysate.



KLHL4 (N-15): sc-138381. Western blot analysis of KLHL4 expression in human placenta tissue extract.

## RESEARCH USE

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