

# KLHL2 (3G3): sc-517087

## BACKGROUND

KLHL2 (kelch-like protein 2), also known as actin-binding protein Mayven, is a 593 amino acid Actin-binding protein. Highly expressed in brain, KLHL2 is thought to play a role in the organization of the Actin cytoskeleton in brain cells. KLHL3 (kelch-like protein 3), is a 587 amino acid protein active in the protein ubiquitination pathway. KLHL3 is thought to be a substrate-specific adapter of an E3 ubiquitin-ligase complex that mediates the ubiquitination of target proteins, which leads to proteasomal degradation of the target protein. KLHL2 and KLHL3 proteins contain 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 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.

## REFERENCES

1. Soltysik-Espanola, M., et al. 1999. Characterization of Mayven, a novel actin-binding protein predominantly expressed in brain. *Mol. Biol. Cell* 10: 2361-2375.
2. Lai, F., et al. 2000. Molecular characterization of KLHL3, a human homologue of the *Drosophila* kelch gene. *Genomics* 66: 65-75.
3. Online Mendelian Inheritance in Man, OMIM™. 2001. Johns Hopkins University, Baltimore, MD. MIM Number: 605775. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
4. Williams, S.K., et al. 2005. Role of Mayven, a kelch-related protein in oligodendrocyte process formation. *J. Neurosci. Res.* 81: 622-631.
5. Bu, X., et al. 2005. Mayven induces c-Jun expression and cyclin D1 activation in breast cancer cells. *Oncogene* 24: 2398-2409.

## CHROMOSOMAL LOCATION

Genetic locus: KLHL2 (human) mapping to 4q32.3.

## SOURCE

KLHL2 (3G3) is a mouse monoclonal antibody raised against amino acids 1-66 representing partial length KLHL2 of human origin.

## PRODUCT

Each vial contains 100 µg IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## 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) for detailed protocols and support products.

## APPLICATIONS

KLHL2 (3G3) is recommended for detection of KLHL2 of human 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

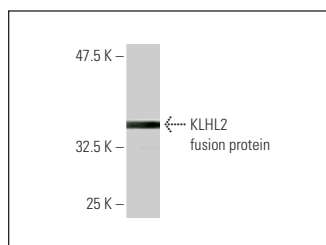
Suitable for use as control antibody for KLHL2 siRNA (h): sc-89076, KLHL2 shRNA Plasmid (h): sc-89076-SH and KLHL2 shRNA (h) Lentiviral Particles: sc-89076-V.

Molecular Weight of KLHL2: 66 kDa.

## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), 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).

## DATA



KLHL2 (3G3): sc-517087. Western blot analysis of human recombinant KLHL2 fusion protein.

## RESEARCH USE

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