

KLHL12 (D-1): sc-514874

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

- 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.
- Lim, J., et al. 2006. A protein-protein interaction network for human inherited ataxias and disorders of Purkinje cell degeneration. *Cell* 125: 801-814.
- Angers, S., et al. 2006. The KLHL12-Cullin-3 ubiquitin ligase negatively regulates the Wnt- β -catenin pathway by targeting Dishevelled for degradation. *Nat. Cell Biol.* 8: 348-357.
- 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.
- 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 (D-1) is a mouse monoclonal antibody raised against amino acids 399-568 mapping at the C-terminus of KLHL12 of human origin.

PRODUCT

Each vial contains 200 μ g IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

KLHL12 (D-1) is available conjugated to agarose (sc-514874 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-514874 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514874 PE), fluorescein (sc-514874 FITC), Alexa Fluor[®] 488 (sc-514874 AF488), Alexa Fluor[®] 546 (sc-514874 AF546), Alexa Fluor[®] 594 (sc-514874 AF594) or Alexa Fluor[®] 647 (sc-514874 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-514874 AF680) or Alexa Fluor[®] 790 (sc-514874 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

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

APPLICATIONS

KLHL12 (D-1) is recommended for detection of KLHL12 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

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.

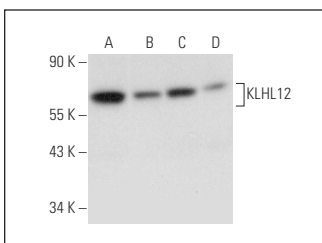
Molecular Weight of KLHL12: 63 kDa.

Positive Controls: NTERA-2 cl.D1 whole cell lysate: sc-364181, HeLa whole cell lysate: sc-2200 or HEK293T whole cell lysate: sc-45137.

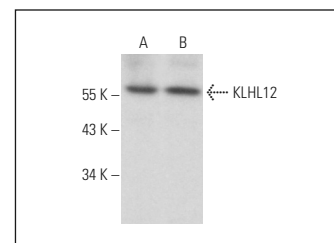
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 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 m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

DATA



KLHL12 (D-1): sc-514874. Western blot analysis of KLHL12 expression in NTERA-2 cl.D1 (A), HeLa (B), HEK293T (C) and IMR-32 (D) whole cell lysates.



KLHL12 (D-1): sc-514874. Western blot analysis of KLHL12 expression in IMR-32 (A) and U-87 MG (B) whole cell lysates.

SELECT PRODUCT CITATIONS

- Hirata, Y., et al. 2022. ER-to-Golgi trafficking of procollagen III via conventional vesicular and tubular carriers. *Mol. Biol. Cell* 33: ar21.
- Zhu, L., et al. 2022. CYP2E1 plays a suppressive role in hepatocellular carcinoma by regulating Wnt/Dvl2/ β -catenin signaling. *J. Transl. Med.* 20: 194.

RESEARCH USE

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

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