

Skeletrophin (D-3): sc-515902

BACKGROUND

Skeletrophin, also known as MIB2 (Mindbomb homolog 2), SKD, ZZANK1 or ZZZ5, is an E3 ubiquitin-protein ligase that regulates Notch signaling via protein degradation. Expressed in heart, brain, kidney and skeletal muscle, Skeletrophin positively regulates Notch signaling by ubiquitinating the intracellular domain of Delta receptors, which act as ligands for Notch proteins. This ubiquitination facilitates transendocytosis of the Notch extracellular domain which, in turn, cues transportation of the Notch intracellular domain to the nucleus, where it activates a variety of genes. Skeletrophin localizes to the endosome and is down-regulated in primary skin melanomas. Treatment of melanoma cells with 5'-aza-2-deoxycytidine, a demethylating agent, increases Skeletrophin expression, suggesting that down-regulation is caused by methylation of the Skeletrophin gene. Six isoforms exist due to alternative splicing events.

REFERENCES

1. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 611141. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
2. Takeuchi, T., et al. 2003. Down-regulation of a novel actin-binding molecule, skeletrophin, in malignant melanoma. *Am. J. Pathol.* 163: 1395-1404.
3. Koo, B.K., et al. 2005. Mind bomb-2 is an E3 ligase for Notch ligand. *J. Biol. Chem.* 280: 22335-22342.
4. Takeuchi, T., et al. 2005. Skeletrophin, a novel RING molecule controlled by the chromatin remodeling complex, is downregulated in malignant melanoma. *DNA Cell Biol.* 24: 339-344.
5. Takeuchi, T., et al. 2005. Skeletrophin, a novel ubiquitin ligase to the intracellular region of Jagged-2, is aberrantly expressed in multiple myeloma. *Am. J. Pathol.* 166: 1817-1826.

CHROMOSOMAL LOCATION

Genetic locus: MIB2 (human) mapping to 1p36.33.

SOURCE

Skeletrophin (D-3) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 92-115 within an internal region of skeletrophin of human origin.

PRODUCT

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

Skeletrophin (D-3) is available conjugated to agarose (sc-515902 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-515902 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515902 PE), fluorescein (sc-515902 FITC), Alexa Fluor® 488 (sc-515902 AF488), Alexa Fluor® 546 (sc-515902 AF546), Alexa Fluor® 594 (sc-515902 AF594) or Alexa Fluor® 647 (sc-515902 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-515902 AF680) or Alexa Fluor® 790 (sc-515902 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Skeletrophin (D-3) is recommended for detection of Skeletrophin of human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for Skeletrophin siRNA (h): sc-63036, Skeletrophin shRNA Plasmid (h): sc-63036-SH and Skeletrophin shRNA (h) Lentiviral Particles: sc-63036-V.

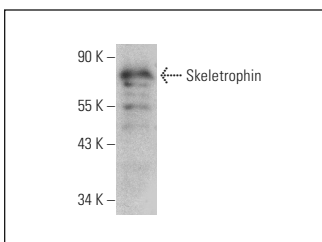
Molecular Weight of Skeletrophin: 70 kDa.

Positive Controls: SCC-4 whole cell lysate: sc-364363.

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, 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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



Skeletrophin (D-3): sc-515902. Western blot analysis of Skeletrophin expression in SCC-4 whole cell lysate.

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 for detailed protocols and support products.

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