

Skeletrophin (E-16): sc-55148

BACKGROUND

Skeletrophin, also known as MIB2 (mind bomb 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. Takeuchi, T., et al. 2003. Down regulation of a novel Actin-binding molecule, Skeletrophin, in malignant melanoma. *Am. J. Pathol.* 163: 1395-1404.
2. Koo, B.K., et al. 2005. Mind bomb-2 is an E3 ligase for Notch ligand. *J. Biol. Chem.* 280: 22335-22342.
3. 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.
4. 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.
5. Takeuchi, T., et al. 2006. A ubiquitin ligase, Skeletrophin, is a negative regulator of melanoma invasion. *Oncogene* 25: 7059-7069.
6. Koo, B.K., et al. 2007. An obligatory role of mind bomb-1 in Notch signaling of mammalian development. *PLoS ONE* 2: e1221.
7. Online Mendelian Inheritance in Man, OMIM™. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 611141. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: MIB2 (human) mapping to 1p36.33; Mib2 (mouse) mapping to 4 E2.

SOURCE

Skeletrophin (E-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Skeletrophin of human origin.

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-55148 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Skeletrophin (E-16) is recommended for detection of Skeletrophin of mouse, rat and 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)], 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).

Skeletrophin (E-16) is also recommended for detection of Skeletrophin in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Skeletrophin siRNA (h): sc-63036, Skeletrophin siRNA (m): sc-63037, Skeletrophin shRNA Plasmid (h): sc-63036-SH, Skeletrophin shRNA Plasmid (m): sc-63037-SH, Skeletrophin shRNA (h) Lentiviral Particles: sc-63036-V and Skeletrophin shRNA (m) Lentiviral Particles: sc-63037-V.

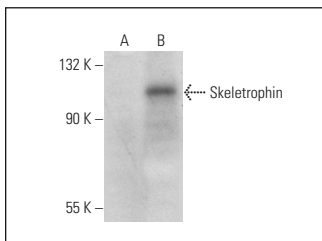
Molecular Weight of Skeletrophin: 70 kDa.

Positive Controls: Skeletrophin (m): 293T Lysate: sc-179469.

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



Skeletrophin (E-16): sc-55148. Western blot analysis of Skeletrophin expression in non-transfected: sc-117752 (A) and mouse Skeletrophin transfected: sc-179469 (B) 293T whole cell lysates.

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.