SANTA CRUZ BIOTECHNOLOGY, INC.

KIF2A (G-11): sc-271005

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Kinesin is a cytoskeletal motor protein involved in axonal transport and cell division. The kinesin superfamily proteins (KIFs) are motor proteins that transport vesicles important for axonal extension in developing neurons, such as macromolecules and membranous organelles, along microtubules. KIFs are involved in neuronal function and development. Kinesin heavy chain member 2A (KIF2A), also designated KNS2, is a microtubule-associated central type motor protein and belongs to the kinesin-like protein family. KIF2A is abundantly present in developing axons. The synthetic retinoid N-(4-hydroxyphenyl)-all-*trans*-retinamide HPR, a cancer chemopreventive agent *in vivo* and an apoptotic cell death inducer *in vitro,* regulates KIF2A.

REFERENCES

1. Debernardi, S., Fontanella, E., De Gregorio, L., Pierotti, M.A. and Delia, D. 1997. Identification of a novel human kinesin-related gene (HK2) by the cDNA differential display technique. Genomics 42: 67-73.
2. Morfini, G., Quiroga, S., Rosa, A., Kosik, K. and Cáceres, A. 1997. Suppression of KIF2 in PC12 cells alters the distribution of a growth cone nonsynaptic membrane receptor and inhibits neurite extension. J. Cell Biol. 138: 657-669.
3. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 602591. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
4. Homma, N., Takei, Y., Tanaka, Y., Nakata, T., Terada, S., Kikkawa, M., Noda, Y. and Hirokawa, N. 2003. Kinesin superfamily protein 2A (KIF2A) functions in suppression of collateral branch extension. Cell 114: 229-239.
5. Hirokawa, N. and Takemura, R. 2004. Kinesin superfamily proteins and their various functions and dynamics. Exp. Cell Res. 301: 50-59.

CHROMOSOMAL LOCATION

Genetic locus: KIF2A (human) mapping to 5q12.1; Kif2a (mouse) mapping to 13 D2.1.

SOURCE

KIF2A (G-11) is a mouse monoclonal antibody raised against amino acids 551-665 mapping near the C-terminus of KIF2A of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 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 for detailed protocols and support products.

APPLICATIONS

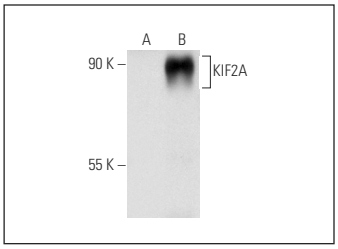
KIF2A (G-11) is recommended for detection of KIF2A of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 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 KIF2A siRNA (h): sc-60884, KIF2A siRNA (m): sc-60885, KIF2A shRNA Plasmid (h): sc-60884-SH, KIF2A shRNA Plasmid (m): sc-60885-SH, KIF2A shRNA (h) Lentiviral Particles: sc-60884-V and KIF2A shRNA (m) Lentiviral Particles: sc-60885-V.

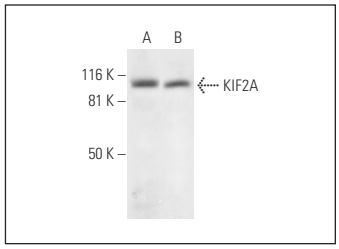
Molecular Weight of KIF2A: 80 kDa.

Positive Controls: KIF2A (m): 293T Lysate: sc-121213, HeLa whole cell lysate: sc-2200 or NIH/3T3 whole cell lysate: sc-2210.

DATA



KIF2A (G-11): sc-271005. Western blot analysis of KIF2A expression in non-transfected: sc-117752 (**A**) and mouse KIF2A transfected: sc-121213 (**B**) 293T whole cell lysates.



KIF2A (G-11): sc-271005. Western blot analysis of KIF2A expression in HeLa (**A**) and NIH/3T3 (**B**) whole cell lysates.

RESEARCH USE

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