

NKHC1 (H-75): sc-25734



The Power to Question

BACKGROUND

NKHC1 (neuronal kinesin heavy chain 1), also known as KIF5A; kinesin family member 5A, NKHC; kinesin heavy chain, neuron-specific, SPG10 and spastic paraplegia 10, is a neuronal-specific component of a multi-subunit "molecular motor" complex that mediates intracellular organelle transport. Mutations in the gene encoding NKHC1 cause autosomal dominant spastic paraplegia 10. NKHC1 has a pan-neuronal distribution in the nervous system. Rat tissue extracts by immunoblot of NKHC1 can produce a doublet only in brain and sciatic nerve tissue. NKHC1 is distributed throughout the central nervous system and is enriched in subsets of neurons. Within cultured hippocampal neurons, NKHC1 is concentrated in the perinuclear region of the cell body. Kinesin superfamily proteins like NKHC1 are the molecular motors conveying cargos along microtubules.

REFERENCES

1. Niclas, J., et al. 1994. Cloning and localization of a conventional kinesin motor expressed exclusively in neurons. *Neuron* 12: 1059-1072.
2. Rahman, A., et al. 1999. Defective kinesin heavy chain behavior in mouse kinesin light chain mutants. *J. Cell Biol.* 146: 1277-1288.

CHROMOSOMAL LOCATION

Genetic locus: KIF5A (human) mapping to 12q13.3; Kif5a (mouse) mapping to 10 D3.

SOURCE

NKHC1 (H-75) is a rabbit polyclonal antibody raised against amino acids 506-580 of NKHC1 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.

APPLICATIONS

NKHC1 (H-75) is recommended for detection of neuronal kinesin heavy chain 1 (NKHC1) 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

NKHC1 (H-75) is also recommended for detection of neuronal kinesin heavy chain 1 (NKHC1) in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for NKHC1 siRNA (h): sc-36073, NKHC1 siRNA (m): sc-36074, NKHC1 shRNA Plasmid (h): sc-36073-SH, NKHC1 shRNA Plasmid (m): sc-36074-SH, NKHC1 shRNA (h) Lentiviral Particles: sc-36073-V and NKHC1 shRNA (m) Lentiviral Particles: sc-36074-V.

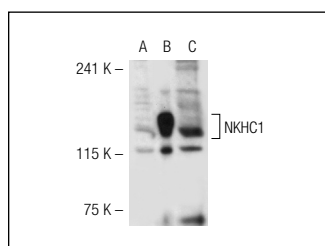
Molecular Weight of NKHC1: 133 kDa.

Positive Controls: NKHC1 (h2): 293T Lysate: sc-112832.

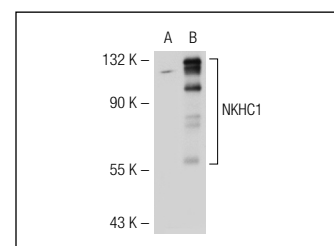
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



NKHC1 (H-75): sc-25734. Western blot analysis of NKHC1 expression in non-transfected 293T: sc-117752 (A), human NKHC1 transfected 293T: sc-112712 (B) and IMR-32 (C) whole cell lysates.



NKHC1 (H-75): sc-25734. Western blot analysis of NKHC1 expression in non-transfected: sc-117752 (A) and human NKHC1 transfected: sc-112832 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Boutchueng-Djidjou, M., et al. 2015. The last enzyme of the *de novo* purine synthesis pathway ATIC plays a central role in Insulin signalling and the Golgi/endosomes protein network. *Mol. Cell. Proteomics*: 14: 1079-1092.

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 or our catalog for detailed protocols and support products.

MONOS
Satisfaction
Guaranteed

Try **NKHC1 (C-11): sc-376452** or **NKHC1 (G-1): sc-374666**, our highly recommended monoclonal alternatives to NKHC1 (H-75).