

KIF1C (E-20): sc-18743

BACKGROUND

The kinesins constitute a large family of microtubule-dependent motor proteins, which are responsible for the distribution of numerous organelles, vesicles and macromolecular complexes throughout the cell. Individual kinesin members play crucial roles in cell division, intracellular transport, and membrane trafficking events including endocytosis and transcytosis. KIF1C is a member of the KIF1/Unc104 family of kinesin-like proteins, which are involved in the transport of mitochondria or synaptic vesicles in axons. Human KIF1C maps to chromosome 17p13.2 and encodes a predicted 1,103 amino acid protein with abundant expression in heart and skeletal muscle. Tyrosine phosphorylation is a putative regulator of KIF1C mediated retrograde transport of Golgi vesicles to the endoplasmic reticulum. KIF1C is capable of forming homodimers and can noncovalently associate with 14-3-3 β , γ , ϵ and ζ . In mouse macrophages, KIF1C is required for anthrax lethal toxin resistance.

REFERENCES

- Hamm-Alvarez, S.F. 1998. Molecular motors and their role in membrane traffic. *Adv. Drug Deliv. Rev.* 29: 229-242.
- Dorner, C., Ciossek, T., Muller, S., Moller, P.H., Ullrich, A. and Lammers, R. 1998. Characterization of KIF1C, a new kinesin-like protein involved in vesicle transport from the Golgi apparatus to the endoplasmic reticulum. *J. Biol. Chem.* 273: 20267-20275.
- Dorner, C., Ullrich, A., Haring, H.U. and Lammers, R. 1999. The kinesin-like motor protein KIF1C occurs in intact cells as a dimer and associates with proteins of the 14-3-3 family. *J. Biol. Chem.* 274: 33654-33660.
- Cole, D.G. 1999. Kinesin-II, the heteromeric kinesin. *Cell. Mol. Life Sci.* 56: 217-226.
- Yang, Z., Xia, C., Roberts, E.A., Bush, K., Nigam, S.K. and Goldstein, L.S. 2001. Molecular cloning and functional analysis of mouse C-terminal kinesin motor KifC3. *Mol. Cell. Biol.* 21: 765-770.

CHROMOSOMAL LOCATION

Genetic locus: KIF1C (human) mapping to 17p13.2; Kif1c (mouse) mapping to 11 B3.

SOURCE

KIF1C (E-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of KIF1C of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-18743 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

KIF1C (E-20) is recommended for detection of KIF1C of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

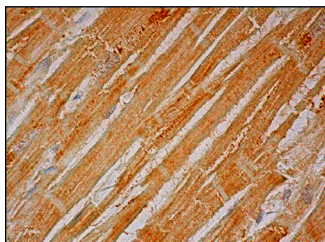
KIF1C (E-20) is also recommended for detection of KIF1C in additional species, including equine and bovine.

Suitable for use as control antibody for KIF1C siRNA (h): sc-43372, KIF1C siRNA (m): sc-43373, KIF1C shRNA Plasmid (h): sc-43372-SH, KIF1C shRNA Plasmid (m): sc-43373-SH, KIF1C shRNA (h) Lentiviral Particles: sc-43372-V and KIF1C shRNA (m) Lentiviral Particles: sc-43373-V.

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) 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. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



KIF1C (E-20): sc-18743. Immunoperoxidase staining of formalin fixed, paraffin-embedded human heart muscle tissue showing cytoplasmic staining of myocytes.

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.