

UKHC (N-15): sc-13356

BACKGROUND

The kinesin motor proteins include at least two forms of conventional kinesin encoded by different genes and designated as ubiquitous kinesin, which is expressed in all cells and tissues, or neuronal kinesin, which is expressed exclusively in neural cells. Kinesin is a microtubule associated protein comprised of three different structural domains. A considerable globular N-terminal domain regulates the hydrolysis of ATP and also microtubule binding while central coiled-coil domains promote heavy chain dimerization. Lastly, small globular C-terminal domains interact with kinesin light chains, membranous organelles and vesicles. Expression of ubiquitous kinesin heavy chain, also designated UKHC, is found subcellularly in areas of heavy vesicular trafficking such as the microtubule pathways of neural cells and also the Golgi of non-neural cell types.

CHROMOSOMAL LOCATION

Genetic locus: KIF5B (human) mapping to 10p11.22; Kif5b (mouse) mapping to 18 A1.

SOURCE

UKHC (N-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of UKHC 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-13356 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

UKHC (N-15) is recommended for detection of ubiquitous kinesin heavy chain (UKHC) 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).

UKHC (N-15) is also recommended for detection of ubiquitous kinesin heavy chain (UKHC) in additional species, including canine, bovine, porcine and avian.

Suitable for use as control antibody for UKHC siRNA (h): sc-36777, UKHC siRNA (m): sc-36778, UKHC shRNA Plasmid (h): sc-36777-SH, UKHC shRNA Plasmid (m): sc-36778-SH, UKHC shRNA (h) Lentiviral Particles: sc-36777-V and UKHC shRNA (m) Lentiviral Particles: sc-36778-V.

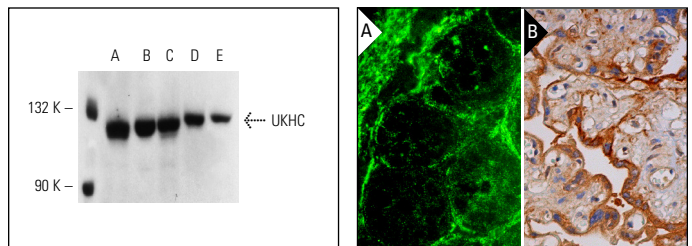
Molecular Weight of UKHC: 120 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, Jurkat whole cell lysate: sc-2204 or HeLa whole cell lysate: sc-2200.

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

DATA



UKHC (N-15): sc-13356. Western blot analysis of ubiquitous kinesin heavy chain expression in Hep G2 (A), Jurkat (B), HeLa (C) and KNRK (D) whole cell lysates and mouse spleen (E) extract.

UKHC (N-15): sc-13356. Immunofluorescence staining of normal mouse intestine frozen section showing cytoplasmic staining (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing cytoplasmic and membrane staining of trophoblastic cells (B).

SELECT PRODUCT CITATIONS

- Daire, V., et al. 2009. Kinesin-1 regulates microtubule dynamics via a c-Jun N-terminal kinase-dependent mechanism. *J. Biol. Chem.* 284: 31992-32001.
- Froidevaux-Klipfel, L., et al. 2011. Modulation of septin and molecular motor recruitment in the microtubule environment of the Taxol-resistant human breast cancer cell line MDA-MB-231. *Proteomics* 11: 3877-3886.
- Perrot, C., et al. 2013. GLI2 cooperates with ZEB1 for transcriptional repression of CDH1 expression in human melanoma cells. *Pigment Cell Melanoma Res.* 26: 861-873.

STORAGE

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



Try **UKHC (F-5): sc-133184** or **UKHC (F-9): sc-133185**, our highly recommended monoclonal alternatives to UKHC (N-15).