KLC3 (S-16): sc-161781

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. KLC3 (kinesin light chain 3), also known as KLC2 or KLC2L, is a 504 amino acid protein that contains 5 TPR repeats and belongs to the kinesin light chain family. Existing as a component of an oligomeric composed of heavy and light chains, KLC3 functions as a microtubule-associated protein that produces mechanical force and is thought to play a role in organelle transport. Multiple isoforms of KLC3 exist due to alternative splicing events.

REFERENCES

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3. Rahman, A., et al. 1999. Defective kinesin heavy chain behavior in mouse kinesin light chain mutants. J. Cell Biol. 146: 1277-1288.

4. Junco, A., et al. 2001. Kinesin light-chain KLC3 expression in testis is restricted to spermatids. Biol. Reprod. 64: 1320-1330.

5. Ichimura, T., et al. 2002. Phosphorylation-dependent interaction of kinesin light chain 2 and the 14-3-3 protein. Biochemistry 41: 5566-5572.

6. Bhullar, B., et al. 2003. Association of kinesin light chain with outer dense fibers in a microtubule-independent fashion. J. Biol. Chem. 278: 16159-16168.

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CHROMOSOMAL LOCATION

Genetic locus: KLC3 (human) mapping to 19q13.32; Klc3 (mouse) mapping to 7 A3.

SOURCE

KLC3 (S-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of KLC3 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-161781 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

KLC3 (S-16) is recommended for detection of KLC3 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); non cross-reactive with other KLC family members.

KLC3 (S-16) is also recommended for detection of KLC3 in additional species, including equine and bovine.

Suitable for use as control antibody for KLC3 siRNA (h): sc-97086, KLC3 siRNA (m): sc-146493, KLC3 shRNA Plasmid (h): sc-97086-SH, KLC3 shRNA Plasmid (m): sc-146493-SH, KLC3 shRNA (h) Lentiviral Particles: sc-97086-V and KLC3 shRNA (m) Lentiviral Particles: sc-146493-V.

Molecular Weight of KLC3: 55 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, MIA PaCa-2 cell lysate: sc-2285 or mouse brain extract: sc-2253.

DATA
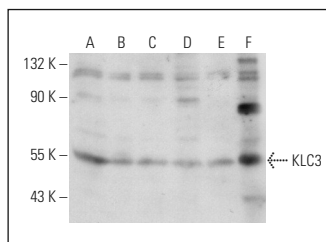
KLC3 (S-16): sc-161781. Western blot analysis of KLC3 expression in Jurkat (**A**), HeLa (**B**), Hep G2 (**C**), K-562 (**D**) and MIA PaCa-2 (**E**) whole cell lysates and mouse brain tissue extract (**F**).

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 or our catalog for detailed protocols and support products.

MONOS
Satisfation
Guaranteed

Try **KLC3 (E-7): sc-398332** or **KLC3 (F-6): sc-398492**, our highly recommended monoclonal alternatives to KLC3 (S-16).