SANTA CRUZ BIOTECHNOLOGY, INC.

Eg5 (20): sc-136223

BACKGROUND

Eukaryotes contain a superfamily of microtubule-based motor proteins comprising Kinesin and a number of related proteins that are thought to participate in various forms of intracellular motility, including cell division and organelle transport. Eg5 (also known as Kinesin-like protein KIF11 or TRIP5) is a slow, plus-end-directed microtubule-based motor of the BimC kinesin family that is essential for bipolar spindle formation during eukaryotic cell division. When the expression of Eg5 is blocked, centrosome migration halts and cells are arrested in mitosis with monoastral microtubule arrays. Eg5 is phosphorylated on serine during S phase and on both serine and Thr 927 during mitosis, which regulates the association of Eg5 with the spindle apparatus (probably during early prophase). Eg5 is also known to be a member of the thyroid receptor interacting protein (TRIP) family, and interacts with the thyroid hormone receptor only in the presence of thyroid hormone.

REFERENCES

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2. Lee, J.W., et al. 1995. Two classes of proteins dependent on either the presence or absence of thyroid hormone for interaction with the thyroid hormone receptor. Mol. Endocrinol. 9: 243-254.
3. Nakagawa, T., et al. 1997. Identification and classification of 16 new kinesin superfamily (KIF) proteins in mouse genome. Proc. Natl. Acad. Sci. USA 94: 9654-9659.
4. Whitehead, C.M., et al. 1998. Expanding the role of HsEg5 within the mitotic and post-mitotic phases of the cell cycle. J. Cell. Sci. 111: 2551-2561.
5. Ferhat, L., et al. 1998. Expression of the mitotic motor protein Eg5 in postmitotic neurons: implications for neuronal development. J. Neurosci. 18: 7822-7835.
6. Mountain, V., et al. 1999. The Kinesin-related protein, HSET, opposes the activity of Eg5 and cross-links microtubules in the mammalian mitotic spindle. J. Cell Biol. 147: 351-366.
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CHROMOSOMAL LOCATION

Genetic locus: KIF11 (human) mapping to 10q24.1.

SOURCE

Eg5 (20) is a mouse monoclonal antibody raised against amino acids 324-532 of Eg5 of human origin.

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. Not for resale.

PRODUCT

Each vial contains 50 µg IgG_1 in 500 µl PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Eg5 (20) is recommended for detection of Eg5 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for Eg5 siRNA (h): sc-37052, Eg5 shRNA Plasmid (h): sc-37052-SH and Eg5 shRNA (h) Lentiviral Particles: sc-37052-V.

Molecular Weight of Eg5: 132 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206, HeLa whole cell lysate: sc-2200 or K-562 whole cell lysate: sc-2203.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (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 goat anti-mouse IgG-FITC: sc-2010 (dilution range: 1:100-1:400) or goat anti-mouse IgG-TR: sc-2781 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.