

# Eg5 (M-20): sc-31646

## 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

- Blangy, A., et al. 1995. Phosphorylation by p34Cdc2 regulates spindle association of human Eg5, a kinesin-related motor essential for bipolar spindle formation *in vivo*. *Cell* 83: 159-1169.
- 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.
- 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.
- 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.
- Ferhat, L., et al. 1998. Expression of the mitotic motor protein Eg5 in post-mitotic neurons: implications for neuronal development. *J. Neurosci.* 18: 7822-7835.

## CHROMOSOMAL LOCATION

Genetic locus: KIF11 (human) mapping to 10q23.33; Kif11 (mouse) mapping to 19 C2.

## SOURCE

Eg5 (M-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Eg5 of mouse 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-31646 P, (100 µg 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

Eg5 (M-20) is recommended for detection of kinesin-related motor protein Eg5 of mouse, rat and, to a lesser extent, 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).

Suitable for use as control antibody for Eg5 siRNA (h): sc-37052, Eg5 siRNA (m): sc-37053, Eg5 shRNA Plasmid (h): sc-37052-SH, Eg5 shRNA Plasmid (m): sc-37053-SH, Eg5 shRNA (h) Lentiviral Particles: sc-37052-V and Eg5 shRNA (m) Lentiviral Particles: sc-37053-V.

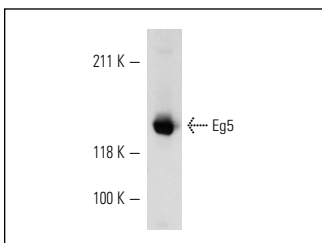
Molecular Weight of Eg5: 132 kDa.

Positive Controls: M1 whole cell lysate: sc-364782.

## 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.

## DATA



Eg5 (M-20): sc-31646. Western blot analysis of Eg5 expression in M1 whole cell lysate.

## RESEARCH USE

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



Try **Eg5 (A-2): sc-365593** or **Eg5 (F-1): sc-374212**, our highly recommended monoclonal alternatives to Eg5 (M-20).