

Eg5 (A-2): sc-365593

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. KIF11 (also known as kinesin family member 11, Eg5 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 KIF11 is blocked, centrosome migration halts and cells are arrested in mitosis with monoastral microtubule arrays. KIF11 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). KIF11 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.

CHROMOSOMAL LOCATION

Genetic locus: Kif11 (mouse) mapping to 19 C2.

SOURCE

Eg5 (A-2) is a mouse monoclonal antibody raised against amino acids 753-1052 mapping at the C-terminus of Eg5 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Eg5 (A-2) is available conjugated to agarose (sc-365593 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365593 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365593 PE), fluorescein (sc-365593 FITC), Alexa Fluor[®] 488 (sc-365593 AF488), Alexa Fluor[®] 546 (sc-365593 AF546), Alexa Fluor[®] 594 (sc-365593 AF594) or Alexa Fluor[®] 647 (sc-365593 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-365593 AF680) or Alexa Fluor[®] 790 (sc-365593 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

Eg5 (A-2) is recommended for detection of Kinesin-related motor protein Eg5 of mouse origin by Western Blotting (starting dilution 1:100, 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).

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

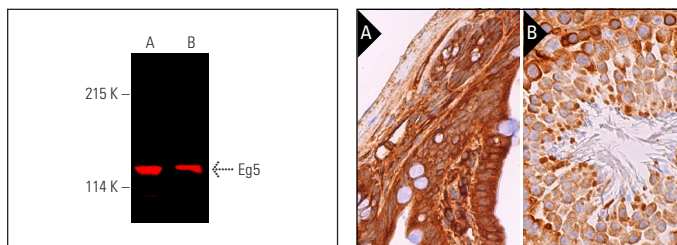
Molecular Weight of Eg5: 132 kDa.

Positive Controls: M1 whole cell lysate: sc-364782, mouse testis extract: sc-2405 or F9 cell lysate: sc-2245.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



Eg5 (A-2): sc-365593. Near-Infrared western blot analysis of Eg5 expression in F9 whole cell lysate (A) and mouse testis tissue extract (B). Blocked with UltraCruz[®] Blocking Reagent: sc-516214. Detection reagent used: m-IgGκ BP-CFL 790: sc-516181.

Eg5 (A-2): sc-365593. Immunoperoxidase staining of formalin fixed, paraffin-embedded mouse small intestine tissue showing cytoplasmic staining of glandular cells (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded mouse testis tissue showing cytoplasmic staining of cells in seminiferous ducts and Leydig cells (B).

SELECT PRODUCT CITATIONS

- Guo, Y., et al. 2015. Lamins position the nuclear pores and centrosomes by modulating Dynein. *Mol. Biol. Cell* 26: 3379-3389.
- Pei, Y.Y., et al. 2017. Kinesin family member 11 contributes to the progression and prognosis of human breast cancer. *Oncol. Lett.* 14: 6618-6626.
- She, Z.Y., et al. 2020. Kinesin-5 Eg5 is essential for spindle assembly and chromosome alignment of mouse spermatocytes. *Cell Div.* 15: 6.

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.

PROTOCOLS

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