

Technical Data Sheet

Purified Mouse Anti-Human Eg5**Product Information**

Material Number:	611186
Size:	50 µg
Concentration:	250 µg/ml
Clone:	20/EG5
Immunogen:	Human Eg5 aa. 324-532
Isotype:	Mouse IgG1
Reactivity:	QC Testing: Human
Target MW:	120 kDa
Storage Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.

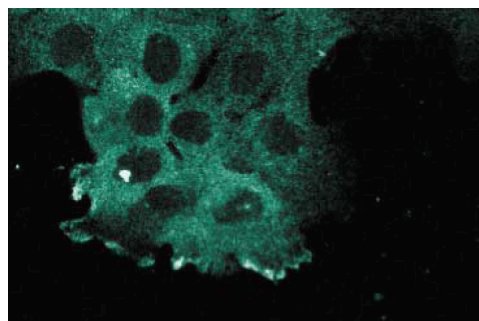
Description

The mitotic spindle apparatus equally distributes duplicated chromosomes to daughter cells. This process is mediated by the dynamic instability of the spindle microtubules and the forces generated by the action of cytoplasmic dynein and kinesin-related motor proteins (KRPs), such as CHO1/MKLP1. These motors hydrolyze ATP as they move progressively along the microtubules. They organize the microtubules into bipolar spindles and may also serve as bridges between microtubules and chromosome kinetochores or centrosomes. Eg5, identified in *Xenopus laevis*, is a plus-end directed KRP, associated with the mitotic spindle. Vertebrate Eg5 is a member of the KRP subfamily bimC. These family members share a high degree of sequence homology (>80% within the N-terminal motor domain) and may execute similar functions. During mitosis, Eg5 is specifically phosphorylated at Thr-297, an evolutionarily conserved cdc2 phosphorylation site, by p34[cdc2]/cyclin B. Inhibition of phosphorylation blocks the interaction of Eg5 with centrosomes. Thus, Eg5 is a mitotic motor protein that regulates spindle formation in a phosphorylation-dependent manner.

This antibody is routinely tested by western blot analysis. Other applications were tested at BD Biosciences Pharmingen during antibody development only or reported in the literature.



Western blot analysis of Eg5 on a human endothelial cell lysate. Lane 1: 1:1000, lane 2: 1:2000, lane 3: 1:4000 dilution of the anti-human Eg5 antibody.



Immunofluorescence staining of A431 cells.

Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography. Store undiluted at -20° C.

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Application Notes

Application

Western blot	Routinely Tested
Immunofluorescence	Tested During Development

Suggested Companion Products

Catalog Number	Name	Size	Clone
611450	Human Endothelial Cell Lysate	500 µg	(none)
554002	HRP Goat Anti-Mouse Igs	1.0 ml	(none)
554001	FITC Goat Anti-Mouse Igs	0.5 mg	Polyclonal

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
4. Source of all serum proteins is from USDA inspected abattoirs located in the United States.

References

Blangy A, Lane HA, d'Herin P, Harper M, Kress M, Nigg EA. Phosphorylation by p34cdc2 regulates spindle association of human Eg5, a kinesin-related motor essential for bipolar spindle formation in vivo. *Cell*. 1995; 83(7):1159-1169.(Biology)

Ferhat L, Cook C, Chauviere M, et al. Expression of the mitotic motor protein Eg5 in postmitotic neurons: implications for neuronal development. *J Neurosci*. 1998; 18(19):7822-7835.(Biology)