Monoclonal Antibody to Kinesin (heavy chain)
Purified Antibody (0.1 mg)

Clone: KN-03
Isotype: Mouse IgM
Specificity: The antibody KN-03 recognizes heavy chain of conventional kinesin associated with vesicles and with lower affinity with denaturated molecule. It stains Western blots of kinesin-enriched preparations. Epitope mapping (by limited proteolysis of partially purified porcine kinesin) followed by immunoblotting has revealed that antibodies KN-01, KN-02 and KN-03 react with different sets of fragments. The antibody KN-03 well recognizes kinesin bound to taxol-stabilized microtubules.

Regulatory Status: RUO
Immunogen: Enriched fraction of porcine brain kinesin.
Species Reactivity: Human, Porcine, Mouse, Rat, Other not tested
Application: Immunocytochemistry
Purity: > 95% (by SDS-PAGE)
Purification: Purified by precipitation and chromatography
Concentration: 1 mg/ml
Storage Buffer: Tris buffered saline (TBS) with 15 mM sodium azide, approx. pH 8.0
Storage / Stability: Store at 2-8°C. Do not freeze. Do not use after expiration date stamped on vial label.
Expiration: See vial label
Lot Number: See vial label
Background: Kinesin belongs to the group of microtubule-associated motor proteins known to convert chemical energy released from nucleoside triphosphates (preferentially from ATP) into mechanical energy. Conventional kinesin, member of the kinesin superfamily comprising more than 100 proteins, is involved in the anterograde vesicle transport in neuronal cells. Kinesin purified from mammalian brain homogenates is a heterotetramer consisting of two heavy (120 to 130 kDa) and two light chains (60 to 70 kDa), resulting in a molecular mass about 400 kDa. Each heavy chain contains an N-terminal globular motordomain with both a microtubule-binding site and an ATPase active center, stalk region responsible for heavy chain dimerization and finally C-terminal globular tail domain, which is implicated in cargo binding. Light chains may have a regulatory function.