

**MOUSE ANTI-DYNEIN, CYTOPLASMIC
(74 kD Intermediate Chains)
MONOCLONAL ANTIBODY**

- CATALOG NUMBER:** MAB1618
- LOT NUMBER:**
- QUANTITY:** 100 µg
- CONCENTRATION:** 1 mg/mL
- SPECIFICITY:** Reacts with all known forms of the Mr = 74,000 Dalton intermediate chain subunit (IC74) of mammalian cytoplasmic dynein. The antigenic site has been localized to the first 60 amino acids of the amino terminal portion of the molecule (a region conserved in both IC74 genes).
- IMMUNOGEN:** Bovine brain cytoplasmic dynein.
- ISOTYPE:** IgG_{2b}
- CLONE NAME:** 74.1
- APPLICATIONS:** Immunocytochemistry: 1:50-1:100. Reacts with cultured MDCK cells, NRR cells, N1E cells, and PTK-1 cells.
Immunoblotting: 1:1,000-1:5,000. Reacts with cultured MDCK cells, PC-12 cells, N1E cells, neurons, glia and other cultured cells.
Immunoprecipitation: 10 µL/0.5 gm tissue. The monoclonal cleanly immunoprecipitates the entire dynein complex stoichiometrically from TX-100 or NP-40 lysates (including the 530 kD heavy chain, the light intermediate chains and the light chains) from various tissues and cultured cell lines. If detergents such as SDS are used to prepare the lysates the only dynein subunits which are immunoprecipitated are the IC74 subunits (presumably because the dynein complex dissociates), and other contaminating proteins can be found in SDS immunoprecipitates. Optimal working dilutions must be determined by end user.
- SPECIES REACTIVITIES:** Rat, mouse, human, bovine, sheep, fish, drosophila and xenopus. Does not react with squid. Not tested on chicken, nematodes or dictyostelium.
- FORMAT:** Purified immunoglobulin
- PRESENTATION:** Liquid in 0.02 M Phosphate buffer, 0.25 M NaCl, pH 7.6 with 0.1% sodium azide.
- STORAGE/HANDLING:** Maintain at 2-8°C in undiluted aliquots for up to 6 months after date of receipt.
- REFERENCES:** Lazarov, Orly, *et al* (2005). Axonal transport, amyloid precursor protein, kinesin-1, and the processing apparatus: revisited. *J Neurosci* **25**: 2386-95.
Hafezparast, M. *et al.* (2003). Mutations in dynein link motor neuron degeneration to defects in retrograde transport. *Science* **300(5620)**: 808-812.
Suikkanen, S *et al* (2003). Exploitation of Microtubule Cytoskeleton and Dynein during Parvoviral Traffic toward the Nucleus. *J Virol* **77(10)**: 10270-10279.

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- Karki, S. *et al.* (2002). PLAC-24 is a cytoplasmic dynein-binding protein that is recruited to sites of cell cell contact. *Mol. Biol. Cell.* **13**: 1722-1734.
- Ligon, Lee *et al.* (2001). Dynein binds to beta-catenin and may tether microtubules at adherens junctions. *Nature Cell Biol* **3(10)**: 913-917.
- Tai, A. W. *et al.* (2001). Cytoplasmic dynein regulation by subunit heterogeneity and its role in apical transport. *J. Cell Biol.* **153(7)**: 1499-1509.
- Reese, E.L. and Haimo, L.T. (2000). *J. Cell Biology* **151**: 155-165.
- Tai, A.W., *et al.* (1999). *Cell* **97**: 877-887.
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- Pfister, K. *et al.* (1996). Differential expression and phosphorylation of the 74-kDa intermediate chains of cytoplasmic dynein in cultured neurons and glia. *J. Biological Chemistry* **271**: 1687-1694.
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- Dillman, J. and Pfister, K. (1994). Differential phosphorylation in vivo of cytoplasmic dynein associated with anterogradely moving organelles. *Journal of Cell Biology* **127**: 1671-1681.
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Important Note: *During shipment, small volumes of product will occasionally become entrapped in the seal of the product vial. For products with volumes of 200 μ L or less, we recommend gently tapping the vial on a hard surface or briefly centrifuging the vial in a tabletop centrifuge to dislodge any liquid in the container's cap.*

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