

Monoclonal Antibody to Disialoganglioside GD3 - Purified

Catalog No.: AM32585PU-N

Quantity: 0.1 mg

Concentration: 1.0 mg/ml

Background: Gangliosides are membrane-bound, sialic acid-containing glycosphingolipids that play a significant role in determining the nature of tetraspanin interactions. Ganglioside GD3 is produced by the transfer of sialic acid from CMP-sialic acid to GM3. This reaction is catalyzed by the type II membrane protein GD3 Synthase. Ganglioside GD3 is known to be important for cell adhesion and growth of cultured malignant cells. It is found in most normal tissues, and its expression increases under pathological conditions and during development and aging processes. In malignant melanoma cells, Ganglioside GD3 is involved in the upregulation of tyrosine phosphorylation for p130 Cas and paxillin. Ganglioside GD3 also mediates apoptosis, functioning as a regulatory molecule and contributing to mitochondrial damage. The level of Ganglioside GD3 present in a cell plays a significant role in determining cell fate.

Host / Isotype: Mouse / IgG3

Recommended Isotype Controls: AM03097PU-N

Clone: MB3.6

Immunogen: FM9 melanoma cells.

Format: **State:** Liquid purified IgG fraction
Purification: Protein A Sepharose Chromatography
Buffer System: 0.02M PB pH 7.6, 0.25M NaCl
Preservatives: 0.09% Sodium Azide

Applications: **Immunohistochemistry on Paraffin Sections:** Use at 5 µg/ml. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.
Immunohistochemistry on Frozen Sections.
Immunofluorescence of cells in culture.
Flow Cytometry: 1-2 µg per 10⁶ cells.
Lysis of GD3 positive (melanoma) cells in presence of complement (Cheresh et al., 1985).
Induction of antibody dependent cellular cytotoxicity (ADCC) (Ortaldo JR et al 1987, J Immunol 138(10):3566-3572).
TLC analysis: Sjoberg, ER (1995) J. Biol. Chem. 270(7):2921-2930.
Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

- Specificity:** Reacts specifically with Human GD3 Ganglioside (Cheresh *et al.*, 1984). No cross-reactivity with other Gangliosides purified from neuroblastoma or melanoma cells.
- Species Reactivity:** **Tested:** Human.
- Storage:** Store undiluted at 2-8°C.
Shelf life: one year from despatch.
- General Readings:**
1. Cheresh, D.A. et al. (1984) Proc. Natl. Acad. Sci. U.S.A. 81: 5767-5771.
 2. Cheresh, D.A. et al. (1985) Proc. Natl. Acad. Sci. U.S.A. 82: 5155-5159.
 3. Ortaldo JR et al. (1987) J Immunol 138:3566-72.