

PRODUCT INFORMATION



Ganglioside G_{D3} Monoclonal Antibody Item No. 28644

Overview and Properties

Contents:	This vial contains 50 µl of monoclonal antibody to ganglioside G _{D3} .
Immunogen:	Purified ganglioside G _{D3} and complete Freund's adjuvant
Form:	Liquid
Storage:	-20°C (as supplied)
Stability:	≥2 years
Host:	Mouse
Isotype:	IgG/IgM
Applications:	ELISA and TLC immunoblotting; The optimal working concentration/dilution should be determined empirically.

Description

Ganglioside G_{D3} (Item No. 17481) is synthesized by the addition of two sialic acid residues to lactosylceramide and can serve as a precursor to the formation of more complex gangliosides by the action of glycosyl- and sialyltransferases.¹ It induces apoptosis in HuT-78 cutaneous T cell lymphoma cells in a concentration-dependent manner and disrupts the mitochondrial membrane potential when used at a concentration of 200 µM.² Expression of ganglioside G_{D3} in G_{D3}-negative SK-MEL-28-N1 malignant melanoma cells increases both cell proliferation and invasion *in vitro*.³ Ganglioside G_{D3}-deficient adult mice exhibit progressive loss of the neural stem cell (NSC) pool and impaired neurogenesis.⁴ Ganglioside G_{D3} Monoclonal Antibody can be used for ELISA and TLC immunoblotting.

References

1. Kolter, T. Ganglioside biochemistry. *ISRN Biochem.* **2012:506160**, (2012).
2. De Maria, R., Lenti, L., Malisan, F., *et al.* Requirement for G_{D3} ganglioside in CD95- and ceramide-induced apoptosis. *Science* **277(5332)**, 1652-1655 (1997).
3. Hamamura, K., Furukawa, K., Hayashi, T., *et al.* Ganglioside GD3 promotes cell growth and invasion through p130Cas and paxillin in malignant melanoma cells. *Proc. Natl. Acad. Sci. U.S.A.* **102(31)**, 11041-11046 (2005).
4. Wang, J., Cheng, A., Wakade, C., *et al.* Ganglioside GD3 is required for neurogenesis and long-term maintenance of neural stem cells in the postnatal mouse brain. *J. Neurosci.* **34(41)**, 13790-13800 (2014).

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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