SANTA CRUZ BIOTECHNOLOGY, INC.

Ganglioside GD2 (11H3): sc-101351



BACKGROUND

Gangliosides are key players in determining the nature of tetraspanin interactions and are major components of the tetraspanin web. The GD2 gangliosides are sialic acid-containing glycosphingolipids that play a role in signal transduction and cell-cell recognition. Ganglioside GD2 production is controlled by GM2/GD2 synthase. It is found in all tissues and localizes to the cell surface. Ganglioside GD2 is involved in the onset of apoptosis by dephosphorylating focal adhesion kinases. Ganglioside GD2 is abundant on neuroblastoma cells and on all tumors originating in the neuroectoderm, such as malignant melanoma, adult T cell leukemia and certain colon and gastric cancers. This suggests that Ganglioside GD2 may be a good target for immunotherapy. Additionally, Ganglioside GD2 is found on mesenchymal stromal cells and may be a unique surface marker.

REFERENCES

- 1. Cheung, N.K., et al. 2006. FCGR2A polymorphism is correlated with clinical outcome after immunotherapy of neuroblastoma with anti-GD2 antibody and granulocyte macrophage colony-stimulating factor. J. Clin. Oncol. 24: 2885-2890.
- 2. Uttenreuther-Fischer, M.M., et al. 2006. Molecular characterization of the anti-idiotypic immune response of a relapse-free neuroblastoma patient following antibody therapy: a possible vaccine against tumors of neuroectodermal origin? J. Immunol. 176: 7775-7786.
- 3. Marconi, S., et al. 2006. Anti-GD2-like IgM autoreactivity in multiple sclerosis patients. Mult. Scler. 12: 302-308.
- 4. Chantada, G.L., et al. 2006. An aggressive bone marrow evaluation including immunocytology with GD2 for advanced retinoblastoma. J. Pediatr. Hematol. Oncol. 28: 369-373.
- 5. Ko, K., et al. 2006. Fundamental study of small interfering RNAs for Ganglioside GD3 synthase gene as a therapeutic target of lung cancers. Oncogene 25: 6924-6935.
- 6. Furukawa, K., et al. 2006. Biosignals modulated by tumor-associated carbohydrate antigens: novel targets for cancer therapy. Ann. N.Y. Acad. Sci. 1086: 185-198.
- 7. Horwacik, I., et al. 2007. Selection of novel peptide mimics of the GD2 Ganglioside from a constrained phage-displayed peptide library. Int. J. Mol. Med. 19: 829-839.
- 8. Thorne, R.F., et al. 2007. Shed Gangliosides provide detergent-independent evidence for type-3 glycosynapses. Biochem. Biophys. Res. Commun. 35: 306-311
- 9. Modak, S., et al. 2007. Disialoganglioside directed immunotherapy of neuroblastoma. Cancer Invest. 25: 67-77.

SOURCE

Ganglioside GD2 (11H3) is a mouse monoclonal antibody raised against Ganglioside GD2 of human origin.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PRODUCT

Each vial contains 500 μ l culture supernatant containing IgG₃ with < 0.1% sodium azide.

APPLICATIONS

Ganglioside GD2 (11H3) is recommended for detection of Ganglioside GD2 of human origin by Western Blotting (starting dilution to be determined by researcher, dilution range 1:10-1:200) and solid phase ELISA (starting dilution to be determined by researcher, dilution range 1:10-1:200); non cross-reactive with other gangliosides.

STORAGE

For immediate and continuous use, store at 4° C for up to one month. For sporadic use, freeze in working aliquots in order to avoid repeated freeze/ thaw cycles. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.



See Ganglioside GD2 (14G2a): sc-53831 for

Ganglioside GD2 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.