

DESCRIPTION

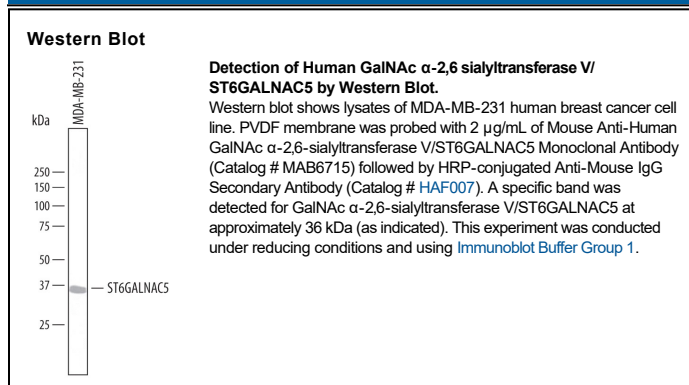
Species Reactivity	Human
Specificity	Detects human GalNAc α -2,6-sialyltransferase V/ST6GALNAC5 in direct ELISAs. In direct ELISAs and Western blots, no cross-reactivity with recombinant human (rh) ST6GALNAC4 or rhST6GALNAC6 is observed.
Source	Monoclonal Mouse IgG _{2A} Clone # 719526
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Chinese hamster ovary cell line CHO-derived recombinant human GalNAc α -2,6-sialyltransferase V/ST6GALNAC5 Gly30-Phe336 Accession # Q9BVH7
Formulation	Lyophilized from a 0.2 μ m filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 μ m filtered solution in PBS.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	Recommended Concentration	Sample
Western Blot	2 μ g/mL	See Below

DATA



PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.5 mg/mL.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Gangliosides are acidic glycosphingolipids that contain one or more sialic acid residues (1). They are abundant in the nervous system, where they play crucial modulatory roles in cellular recognition, interaction, adhesion, and signal transduction, particularly during early developmental stages. The expression of gangliosides in the nervous system is developmentally regulated through various sialyltransferases (2). ST6GALNAC5 is a sialyltransferase involved in the biosynthesis of ganglioside GD1a (NeuAca2,3Gal β 1,3GalNAc β 1,4(NeuAca2,3)Gal β 1,4Glc β 1-Cer) from GM1b (NeuAca2,3Gal β 1,3GalNAc β 1,4Gal β 1,4Glc β 1-Cer), and its expression is restricted to the brain (3, 4). ST6GALNAC5 has been identified as a key player in the metastasis of breast cancer cells to the brain by potentially enabling the cancer cells to cross the blood-brain barrier (5, 6). The recombinant ST6GALNAC5 was active on fetuin from fetal calf serum when assayed using a phosphatase-coupled method (7) suggesting the substrate specificity of ST6GALNAC5 may require further characterization.

References:

1. Kolter, T. *et al.* (2002) *J. Biol. Chem.* **277**:25859.
2. Yu, R.K. *et al.* (2008) *Glycoscience* DOI: [10.1007/978-3-540-30429-6_41](https://doi.org/10.1007/978-3-540-30429-6_41).
3. Okajima, T. *et al.* (1999) *J. Biol. Chem.* **274**:30557.
4. Harduin-Lepers, A. *et al.* (2005) *Glycobiology* **15**:805.
5. Bos, P.D. *et al.* (2009) *Nature* **459**:1005.
6. Arshad, F. *et al.* (2011). *Patholog. Res. Int.* DOI: [10.4061/2011/920509](https://doi.org/10.4061/2011/920509).
7. Wu, Z.L. *et al.* (2010) *Glycobiology* DOI: [10.1093/glycob/cwq187](https://doi.org/10.1093/glycob/cwq187).