

## PRODUCT DATA SHEET

### Anti-ganglioside GD<sub>1b</sub> (polyclonal antibody)

<b>Catalog number:</b>	1964
<b>Common Name:</b>	Polyclonal antibody to GD <sub>1b</sub> ; isotype IgG/IgM; Anti-GD <sub>1b</sub>
<b>Host:</b>	Rabbit
<b>Preparation:</b>	Purified anti-ganglioside GD <sub>1b</sub> and complete Freund's adjuvant was used to immunize rabbits. Serum containing IgG/IgM was isolated <sup>1</sup>
<b>Limit of Detection:</b>	Optimal ELISA ca. 20ng of antigen
<b>Quality Control:</b>	ELISA and TLC immunoblotting with peroxidase reaction <sup>2</sup>
<b>Selectivity:</b>	Intensely reacts with GD <sub>1b</sub> and GM <sub>1</sub> , and sparsely with GM <sub>2</sub> . The degree of the reaction is noted as GD <sub>1b</sub> > GM <sub>1</sub> > GM <sub>2</sub>
<b>Storage:</b>	-20°C
<b>Dilution:</b>	Phosphate buffered saline (pH 7.4) is recommended
<b>Preservatives:</b>	None

### **Application Notes:**

Anti-ganglioside GD<sub>1b</sub> (anti-GD<sub>1b</sub>) is very useful in the identification of disialoganglioside GD<sub>1b</sub> and in immunotargeting cells expressing disialoganglioside GD<sub>1b</sub>. Several gangliosides have been found to have elevated expressions in tumor cells. Many therapeutic treatments of tumor cells are being investigated using antibodies to target cells that express these elevated levels of gangliosides. GD<sub>1b</sub> may be a target molecule for autoantibodies in some patients with acute sensory ataxic neuropathy.<sup>3</sup> Anti-GD<sub>1b</sub> has been found in some patients with Guillain-Barré syndrome (a disorder affecting the peripheral nervous system) and may contribute to the pathogenesis of sensory disturbance and demyelination.<sup>4</sup>

### **Selected References:**

1. H. Yoshino, et al. "Fucosyl-GM1 in Human Sensory Nervous Tissue Is a Target Antigen in Patients with Autoimmune Neuropathies" *Journal of Neurochemistry*, Vol. 61 pp. 658, 1993
2. S. Kusunoki, et al. "Neuropathy and IgM paraproteinemia: Differential binding of IgM M-proteins to peripheral nerve glycolipids" *Neurology*, Vol. 37 pp. 1795, 1987
3. C. Pan et al. "Acute sensory ataxic neuropathy associated with monospecific anti-GD1b IgG antibody" *Neurology*, vol. 57(7) pp. 1316-1318, 2001
4. F. Notturmo MD, C. Caporale MD, A. Uncini MD "Acute sensory ataxic neuropathy with antibodies to GD1b and GQ1b gangliosides and prompt recovery" *Muscle & Nerve*, Vol. 37(2) pg. 265-268, 2008

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