SZABO SCANDIC

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# Produktinformation

- Forschungsprodukte & Biochemikalien
- Zellkultur & Verbrauchsmaterial
- Diagnostik & molekulare Diagnostik
- Laborgeräte & Service

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## Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

## Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand


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# Anti-GM2 [DMF10.167.4] Standard Size Ab03387-10.3

This antibody was created using our proprietary Fc Silent™ engineered Fc domain containing key point mutations that abrogate binding to Fc gamma receptors.

This chimeric human antibody was made using the variable domain sequences of the original Hamster IgG format for improved compatibility with existing reagents assays and techniques.

**Isotype and Format:** Human IgG1, Fc Silent™, Kappa
**Clone Number:** DMF10.167.4
**Alternative Name(s) of Target:** ganglioside GM2; Tay–Sachs ganglioside; β-D-GalNAc-(1→4)-[α-Neu5Ac-(2→3)]-β-D-Gal-(1→4)-β-D-Glc-(1↔1)-N-octadecanoylsphingosine
**UniProt Accession Number of Target Protein:**
**Published Application(s):** in vitro, in vivo, inhibition, ELISA, FC, IF
**Published Species Reactivity:** Human, Mouse
**Immunogen:** The original hamster antibody was raised against murine E710.2.3 thymic lymphoma cells.
**Specificity:** The antibody specifically binds to GM2. The epitope recognized by the antibody consists of a combination of the terminal galactose sugar and the sialic acid residue. The antibody does not cross react with GM1, GM3, sialic acid–deficient ganglioside asialoGM2. Gangliosides are glycosphingolipids that are present in high numbers on cells of neural crest origin as well as on a wide variety of tumor cells of neuroectodermal origin.
**Application Notes:** The antibody was employed in flow cytometry showing that numerous types of tumor cell lines expressed cell surface GM2. 14 SCLC lines were tested for surface expression of GM2 and eight lines, including LU-135, LU-134B, HTB 175, SBC-3, LU-139, HTB 171, HTB-120, and NCI-H187, showed strong positive staining for GM2 expression, while five lines, including HTB-180, NCI-H69, DMS-79, SHP-77, and HTB173, showed weak binding. CHL-1, Mel S, and Mel D, the melanoma cell lines tested, had strong surface GM2 expression. Further, two kidney carcinoma lines, HEK293 and HICK 10-4, and the Jurkat T-cell and K562 B-cell leukemia lines were strongly positive. The antibody was able to induce apoptosis and/or block cellular proliferation when cultured in vitro with the human Jurkat T lymphoma, CHL-1 melanoma, and SBC-3 small cell lung carcinoma lines. No apoptotic activity was observed after culture of this antibody with normal cells. In vivo, the antibody antibody was well tolerated in mice and did not detectably bind to or damage normal tissues. However, this antibody was able to prevent murine E710.2.3 lymphoma, human CHL-1 melanoma, and SBC-3 small cell lung carcinoma lines from establishing tumors in vivo and blocked the progression of established CHL-1 and SBC-3 tumors in vivo. Therefore, the antibody has

immunotherapeutic potential (Retter et al., 2005; PMID:16024647). The specificity of the original format of the antibody for GM2 was confirmed by ELISA analysis (Biswas et al., 2009; PMID: 19801523; Retter et al., 2005; PMID:16024647 and US7935338). The antibody was shown to recognize and bind GM2 on the surface of myeloma cell lines, such as MM-1S, RPMI-8226 and LP-1. Further, the ability of the antibody to inhibit the proliferation of myeloma cells in vitro was demonstrated. Finally, the chimeric version of the antibody was constructed, which induced apoptosis of several human tumor cell lines in vitro, including the Jurkat T cell leukemia line, the CHL-1 melanoma line and the HTB 175 SCLC line (US7935338). Immunofluorescence microscopy was performed using the antibody to compare the levels of GM2 expression in various tumor cell lines, such as SK-RC-26B, CCF52, CCF4, A549 and H1299 (Kundu et al., 2016; PMID: 27066976). The antibody partially blocked (50-60%) T-cell apoptosis induced by coculturing lymphocytes with RCC cell lines or with RCC tissue-derived gangliosides (Biswas et al., 2006; PMID: 16818659)

**Antibody First Published in:** Retter et al. Characterization of a proapoptotic antiganglioside GM2 monoclonal antibody and evaluation of its therapeutic effect on melanoma and small cell lung carcinoma xenografts Cancer Res. 2005 Jul 15;65(14):6425-34. PMID:16024647

**Note on publication:** The original paper describes the generation and characterization of the antibody.

## Product Form

**Size:** 200 µg Purified antibody.

**Purification:** Protein A affinity purified

**Supplied In:** PBS with 0.02% Proclin 300.

**Storage Recommendation:** Store at 4$^{o}$C for up to 3 months. For longer storage, aliquot and store at -20$^{o}$C.

**Concentration:** 1 mg/ml.

Important note – This product is for research use only. It is not intended for use in therapeutic or diagnostic procedures for humans or animals.