Technical Data Sheet

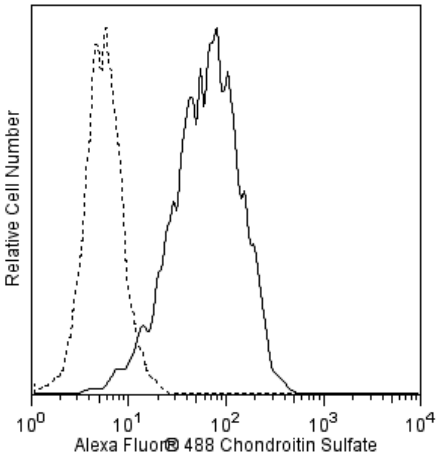
Alexa Fluor® 488 Mouse Anti-Chondroitin Sulfate

Product Information

Material Number:	**562413**
Alternate Name:	CSPG4; NG2; Chondroitin sulfate proteoglycan 4; MCSP; MCSPG; MELCSPG; MSK16
Size:	50 tests
Vol. per Test:	5 µl
Clone:	9.2.27
Immunogen:	Extracts of Human M21 Melanoma Cells
Isotype:	Mouse (BALB/c) IgG2a
Reactivity:	QC Testing: Human
Storage Buffer:	Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

Description

The 9.2.27 monoclonal antibody specifically binds to CSPG4 (chondroitin sulfate proteoglycan 4). CSPG4 is also known as MCSP (melanoma chondroitin sulfate proteoglycan) and NG2 (neural/glial antigen 2). The hybridoma secreting the 9.2.27 antibody was generated using a human melanoma cell extract as the immunogen. Tumor cells display a variety of antigens which have been defined by antibodies. Antibodies that specifically react with tumor-associated antigens are useful in understanding the biology of particular tumor types. Proteoglycans including chondroitin sulfate, keratan sulfate, dermatan sulfate and heparan sulfate are major components of the extracellular matrices of many animal cell types. Clone 9.2.27 has been shown to react with human melanoma cells, glioma cells, and proliferating brain endothelial cells. It did not react with fetal melanocytes, neuroblastoma LA-N-1 cells or a variety of carcinoma, lymphoid, and fibroblastoid cell lines. Additionally, neither white nor gray matter from the medulla oblongata, cerebellum or spinal cord of a normal human adult reacted with 9.2.27. Clone 9.2.27 has also been used in functional studies to investigate the role of chondroitin sulfate proteoglycans in human tumor cell systems. It has been shown to block melanoma cell spreading, exhibit antiproliferative effects on glioma cells *in vitro* and suppress glioma tumor growth in athymic nude mice models.



Flow cytometric analysis of Chondroitin Sulfate expressed on M21 human melanoma cells. *Human M21 cells were stained with either Alexa Fluor® 488 Mouse Anti-Human Chondroitin Sulfate antibody (Cat. No. 562413, solid line histogram) or an Alexa Fluor® 488 mIgG2a, κ Isotype Control (Cat. No. 557703; dashed line histogram). Flow cytometric fluorescence histograms were derived from gated events with the forward and side light-scatter characteristics of viable cells. Flow cytometry was performed using a BD™ LSR II Flow Cytometer System.*

Preparation and Storage

Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

The antibody was conjugated to Alexa Fluor® 488 under optimum conditions, and unreacted Alexa Fluor® 488 was removed.

Application Notes

Application

Flow cytometry	Routinely Tested

Suggested Companion Products

Catalog Number	Name	Size	Clone
557703	Alexa Fluor® 488 Mouse IgG2a, κ Isotype Control	100 tests	G155-178
554656	Stain Buffer (FBS)	500 ml	(none)

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Product Notices

1. This reagent has been pre-diluted for use at the recommended Volume per Test. We typically use 1 × 10^6 cells in a 100-µl experimental sample (a test).
2. An isotype control should be used at the same concentration as the antibody of interest.
3. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
4. The Alexa Fluor®, Pacific Blue™, and Cascade Blue® dye antibody conjugates in this product are sold under license from Molecular Probes, Inc. for research use only, excluding use in combination with microarrays, or as analyte specific reagents. The Alexa Fluor® dyes (except for Alexa Fluor® 430), Pacific Blue™ dye, and Cascade Blue® dye are covered by pending and issued patents.
5. Alexa Fluor® 488 fluorochrome emission is collected at the same instrument settings as for fluorescein isothiocyanate (FITC).
6. Alexa Fluor® is a registered trademark of Molecular Probes, Inc., Eugene, OR.
7. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
8. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
9. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.

References

Bumol TF, Walker LE, Reisfeld RA. Biosynthetic studies of proteoglycans in human melanoma cells with a monoclonal antibody to a core glycoprotein of chondroitin sulfate proteoglycans. *J Biol Chem.* 1984; 259(20):12733-12741. (Clone-specific: Blocking, Immunofluorescence, Immunoprecipitation, Inhibition)

Morgan AC, Galloway DR, Reisfeld RA. Production and characterization of monoclonal antibody to a melanoma specific glycoprotein. *Hybridoma.* 1981; 1(1):27-36. (Immunogen)

Pluschke G, Vanek M, Evans A, Dittmar T, Schmid P, Itin P, Filardo EJ, Reisfeld RA. Molecular cloning of a human melanoma-associated chondroitin sulfate proteoglycan. *Proc Natl Acad Sci U S A.* 1996; 93(18):9710-9715. (Clone-specific: Immunoprecipitation)

Schrappe M, Bumol TF, Apelgren LD. Long-term growth suppression of human glioma xenografts by chemoimmunoconjugates of 4-desacetylvinblastine-3-carboxyhydrazide and monoclonal antibody 9.2.27. *Cancer Res.* 1992; 52(14):3838-3844. (Clone-specific: ELISA, Flow cytometry, Functional assay, Immunofluorescence, Inhibition)

Spiro RC, Casteel HE, Laufer DM, Reisfeld RA, Harper JR. Post-translational addition of chondroitin sulfate glycosaminoglycans. Role of N-linked oligosaccharide addition, trimming, and processing. *J Biol Chem.* 1989; 264(3):1779-1786. (Clone-specific: Immunoprecipitation)

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