Mouse Meteorin Antibody

Monoclonal Rat IgG_{2B} Clone # 347505

Catalog Number: MAB3475

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse Meteorin in direct ELISAs and Western blots.
Source	Monoclonal Rat IgG_{2B} Clone # 347505
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse Meteorin isoform 1 Gly22-Asp291 Accession # Q8C1Q4
Formulation	Lyophilized from a 0.2 μm 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 μm filtered solution in PBS.

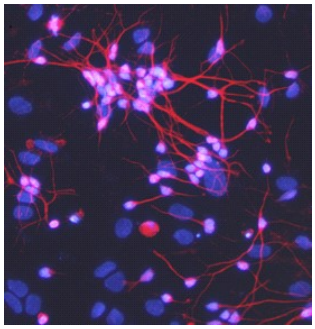
APPLICATIONS

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	1 µg/mL	Recombinant Mouse Meteorin (Catalog # 3475-MN)
Immunocytochemistry	8-25 µg/mL	See Below

DATA

Immunocytochemistry



Meteorin in Rat Cortical Stem Cells. Meteorin was detected in immersion fixed 7 day differentiated rat cortical stem cells using 10 µg/mL Rat Anti-Mouse Meteorin Monoclonal Antibody (Catalog # MAB3475) for 3 hours at room temperature. Cells were stained with the NorthernLights™ 557-conjugated Anti-Rat IgG Secondary Antibody (red; Catalog # NL013) and counterstained with DAPI (blue). View our protocol for Fluorescent ICC Staining of Cells on Coverslips.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
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.** ● 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

Meteorin, named after meteors because this protein can transform glial cells into cells with elongated tails, is a 30 kDa member of the Meteorin family (1). The secreted protein is also known as glial cell differentiation factor and hypoxia/reoxygenation regulatory factor. Mouse Meteorin is synthesized as a 291 amino acid (aa) precursor with a 21 aa signal sequence and a 270 aa mature chain. Alternative splicing produces two isoforms. Isoform 2 is missing residues 1-164 found in isomer 1, and has a two aa substitution for aa 165-166. Mouse Meteorin shares 81% aa identity with human Meteorin (2). Meteorin is expressed in the central nervous system both during development and in adult mice (2). During development, Meteorin mRNA appears both in the central and peripheral nervous systems with the most prominent levels in neural progenitors, glial progenitors, and cells of the astrocyte lineage. In the adult mouse, Meteorin is detected only in the brain (2). Within the brain, the most prominent expression is found in the cerebellum where it is expressed by glial cells interspersed between Purkinje neurons (2). Meteorin is also detectable in several discrete neuronal populations, such as the superior colliculus, the ocular motor nucleus, the raphe and pontine nuclei, and various thalamic nuclei (2). Functionally, Meteorin plays important roles in both glial cell differentiation and axonal network formation during neurogenesis (1). In addition, when Meteorin is expressed and secreted by perivascular astrocytes, it upregulates thrombospondin-1/-2 to attenuate angiogenesis in the surrounding endothelial cells and to promote vascular maturation (3).

References:

1. Nishino, J. *et al.* (2004) EMBO J. **23**:1998.
2. Jorgensen, J.R. *et al.* (2009) J. Mol. Neurosci. 39:104.
3. Park, J.A. *et al.* (2008) Glia **56**:247.

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