

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse METRNL in direct ELISAs.
Source	Monoclonal Rat IgG _{2B} Clone # 829535
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Chinese hamster ovary cell line CHO-derived recombinant mouse METRNL Gln46-Glu311 Accession # Q8VE43
Conjugate	Alexa Fluor 350 Excitation Wavelength: 346 nm Emission Wavelength: 442 nm
Formulation	Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details. *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

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
Intracellular Staining by Flow Cytometry	0.25-1 µg/10 ⁶ cells	Neuro-2A mouse neuroblastoma cell line

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. <ul style="list-style-type: none"> ● 12 months from date of receipt, 2 to 8 °C as supplied.

BACKGROUND

Meteorin-like protein (METRNL) is a 311 amino acid (aa) protein that shows 45% homology with Meteorin (in mouse). Meteorin itself is a secreted 30 kDa protein that is expressed in glial and neuronal cells and their precursors during development and in the adult (1-3). In the adult Meteorin is primarily expressed by astrocytes (3). Meteorin promotes neurite outgrowth, glial cell differentiation, and neuronal survival following excitotoxic injury (2-5). It also inhibits sprouting angiogenesis and promotes blood vessel maturation (1). Mouse Meteorin-like protein is synthesized with a 45 amino acid (aa) signal peptide and is selectively expressed in the otic vesicle during inner ear development (6, 7). Mature mouse Meteorin-like protein shares 79% and 98% aa sequence identity with human and rat Meteorin-like protein, respectively. Alternate splicing generates an additional isoform that lacks the N-terminal 82 amino acids including the signal peptide. R&D Systems in-house testing indicates that Meteorin-like protein enhances the outgrowth of neurites from cultured mouse cortical neurons. The promoter region of the METRNL gene contains a recognition site for the Pax2, Pax5, and Pax8 transcription factors, and Pax2 binds specifically to this region (7). METRNL is the only gene found within the terminus of the human chromosome 17 q-arm which can be deleted in the rare Ring 17 syndrome (8).

References:

1. Park, J.A. *et al.* (2008) *Glia* **56**:247.
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3. Lee, H.S. *et al.* (2010) *J. Cell Sci.* **123**:1959.
4. Nishino, J. *et al.* (2004) *EMBO J.* **23**:1998.
5. Jorgensen, J.R. *et al.* (2011) *Neurobiol. Dis.* **41**:160.
6. Accession # Q8VE43.
7. Ramalison, M. *et al.* (2008) *Genome Biol.* **9**:R145.
8. Surace, C. *et al.* (2009) *Clin. Genet.* **76**:256.

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