

Human/Rat MDGA2 Alexa Fluor® 405-conjugated Antibody

Monoclonal Mouse IgG_{2B} Clone # 803732

Catalog Number: FAB5184V

100 µg

DESCRIPTION

| | |
|---------------------------|---|
| Species Reactivity | Human/Rat |
| Specificity | Detects human MDGA2 in direct ELISAs. Detects rat MDGA2 in Flow Cytometry. |
| Source | Monoclonal Mouse IgG _{2B} Clone # 803732 |
| Purification | Protein A or G purified from hybridoma culture supernatant |
| Immunogen | Mouse myeloma cell line NS0-derived recombinant human MDGA2 Gln21-Asp934 Accession # Q7Z553 |
| Conjugate | Alexa Fluor 405 Excitation Wavelength: 405 nm Emission Wavelength: 421 nm |
| Formulation | Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. *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 |
|-----------------------|----------------------------------|-------------------------|
| Flow Cytometry | 0.25-1 µg/10 ⁶ cells | Rat cortical stem cells |

PREPARATION AND STORAGE

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|--------------------------------|--|
| 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

MDGA2 (MAM domain-containing glycosylphosphatidylinositol anchor protein 2; also named MAMDC1) is a 130 kDa member of the Ig superfamily of proteins (1). Human MDGA2 is synthesized as a 956 amino acid (aa) precursor that contains a 25 aa signal sequence, a 906 aa mature chain, and a 25 aa propeptide. The mature chain consists of six Ig-like domains, followed by a MAM domain (aa 746-921) and a GPI anchor. In addition, there are eight potential sites for N-linked glycosylation. Mature human MDGA2 shares 98% aa sequence identity with mature mouse and rat MDGA2. MDGA2 is structurally similar to other IgCAMS, such as the L1 family and axonin 1, which have roles in cell adhesion, migration, and process outgrowth (2). Northern blot analysis shows MDGA2 expression is limited to the central and peripheral nervous system (1). Within the brain, moderate expression is observed in the cerebral cortex, the hindbrain, the basilar pons, the neocortex, the hippocampus, the amygdala, olfactory bulb, and selected nuclei of the thalamus (1). The similarity of MDGA2 to other Ig-containing molecules, and its temporal-spatial patterns of expression within restricted neuronal populations, suggest a role for MDGA2 in regulating neuronal migration, as well as other aspects of neural development, including axon guidance (1). One study shows that MDGA2 gene is implicated in neuroticism (3).

References:

1. Litwack, E.D. *et al.* (2004) Mol. Cell. Neurosci. **25**:263.
2. Takeuchi, A. and D.D.M. O'Leary (2006) J. Neurosci. **26**:4460.
3. van den Oord, E.J. *et al.* (2008) Arch Gen Psychiatry **65**:1062.

PRODUCT SPECIFIC NOTICES

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