R&D SYSTEMS
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Mouse Slit3 Antibody

Monoclonal Rat IgG_{2B} Clone # 782619

Catalog Number: MAB3629

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse Slit3 in direct ELISAs. In direct ELISAs, no cross-reactivity with recombinant mouse (rm) Slit1, rmSlit2, or recombinant human Slit3 is observed.
Source	Monoclonal Rat IgG_{2B} Clone # 782619
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse Slit3 Ser27-His901 Accession # Q9WVB4
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 as a 0.2 µm filtered solution in PBS.

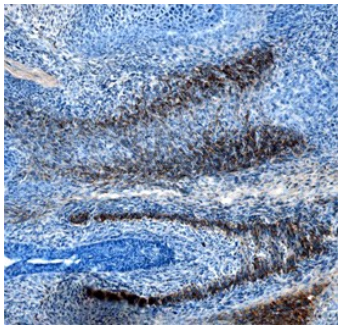
APPLICATIONS

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
Immunohistochemistry	8-25 µg/mL	See Below

DATA

Immunohistochemistry



Slit3 in Mouse Embryo. Slit3 was detected in immersion fixed frozen sections of mouse embryo (15 d.p.c.) using Rat Anti-Mouse Slit3 Monoclonal Antibody (Catalog # MAB3629) at 25 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Rat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS017) and counterstained with hematoxylin (blue). Specific staining was localized to developing muscle cells. View our protocol for Chromogenic IHC Staining of Frozen Tissue Sections.

PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.5 mg/mL.
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.

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BACKGROUND

Slit3 is a member of the slit family of large secreted axon guidance molecules that are ligands for Robo receptors (1). Like other mammalian family members, the 1523 amino acid (aa), 200 kDa Slit3 contains a signal sequence followed by 23 leucine-rich repeats (LRR) and nine EGF-like sequences (1). Mammalian Slits also contain a laminin-G domain between EGF6 and EGF7, and a C-terminal cysteine-rich domain (1). In Drosophila Slit, specific LRR are sites of ROBO interaction and homodimerization (2). Drosophila Slit shows equal similarities with all three mouse slit proteins, which are 59-66% identical with each other (1). During development, Slit3 is expressed in the ventral neural tube, developing sensory organs, limb buds and developing areas of the limbs in patterns that overlap with but are discrete from Slit1 and Slit2 (1). Axons will not be allowed to recross the floor plate unless all three Slit genes are disrupted, suggesting some overlap in function (3). Slit3 is also expressed in the lung, kidney, skeletal muscle and heart, both during development and postnatally (1, 4-6). ROBO2 is often found in complementary areas (4). Mice with genetically disrupted Slit3 have thin diaphragms with disorganized collagen fibrils and frequently develop diaphragmatic hernias (5, 6). Abnormalities in kidney development may also occur (5). Although Slit proteins are generally considered to be secreted, significant amounts of Slit3 may be retained in the mitochondria because of features in the signal sequence that indicate a high probability of mitochondrial targeting (7). Secreted Slit is often membrane-associated (7). Mouse Slit3 shows 98% and 94% amino acid identity with rat and human Slit3, respectively.

References:

1. Yuan, W. *et al.* (1999) Dev. Biol. **212**:290.
2. Howitt, J. A. *et al.* (2004) EMBO J. **23**:4406.
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4. Greenberg, J. M. *et al.* (2004) Dev. Dyn. **230**:350.
5. Liu, J. *et al.* (2003) Mech. Dev. **120**:1059.
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7. Little, M. H. *et al.* (2001) Am. J. Physiol. Cell Physiol. **281**:C486.

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