

DESCRIPTION

Species Reactivity	Human/Mouse/Rat
Specificity	Detects human, mouse and rat Slit3 in Western blots.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse Slit3 Ser27-His901 Accession # Q9WVB4
Endotoxin Level	<0.20 EU per 1 µg of the antibody by the LAL method.
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
Immunohistochemistry	5 µg/mL	Immersion-fixed paraffin-embedded 13 d.p.c. mouse embryo
Neutralization	In a functional ELISA, 3-18 µg/mL of this antibody will block 50% of the binding of 500 ng/mL of Recombinant Human ROBO2 Fc Chimera (Catalog # 3147-RB) to immobilized Recombinant Mouse Slit3 (Catalog # 9296-SL) coated at 500 ng/mL (100 µL/well). At 25 µg/mL, this antibody will block >80% of the binding.	

DATA

Immunohistochemistry



Slit3 in 13 D.P.C. Mouse Embryo. Slit3 was detected in immersion fixed paraffin-embedded sections of 13 d.p.c. mouse embryo using Goat Anti-Human/Mouse/Rat Slit3 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF3629) at 5 µg/mL for 1 hour at room temperature followed by incubation with the Anti-Goat IgG VisUCyte™ HRP Polymer Antibody (Catalog # VC004). Before incubation with the primary antibody, tissue was subjected to heat-induced epitope retrieval using Antigen Retrieval Reagent-Basic (Catalog # CTS013). Tissue was stained using DAB (brown) and counterstained with hematoxylin (blue). Specific staining was localized to developing brain and cartilage.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 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. <ul style="list-style-type: none"> • 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

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) 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.
3. Long, H. *et al.* (2004) *Neuron* **42**:213.
4. Greenberg, J. M. *et al.* (2004) *Dev. Dyn.* **230**:350.
5. Liu, J. *et al.* (2003) *Mech. Dev.* **120**:1059.
6. Yuan, W. *et al.* (2003) *Proc. Natl. Acad. Sci. USA* **100**:5217.
7. Little, M. H. *et al.* (2001) *Am. J. Physiol. Cell Physiol.* **281**:C486.