

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse Layilin Ectodomain in Western blots. In Western blots, approximately 40% cross-reactivity with recombinant human Layilin is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse Layilin Ectodomain Lys18-Glu229 (Ala29-Gly36 del) Accession # Q8C351
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with BSA as a carrier protein. See Certificate of Analysis for details.

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	0.1 µg/mL	Recombinant Mouse Layilin (Catalog # 2646-LA)

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.
Stability & Storage	<p>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</p> <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

Layilin (named after the L-A-Y-I-L-I amino acid motif in the transmembrane segment) is a member of the animal C-type lectin family (1). The mouse Layilin cDNA encodes a 402 amino acid (aa) type I transmembrane protein that, based on the orthologous molecule in hamster, contains a 19 aa signal sequence, a 211 aa extracellular domain (ECD), a 30 aa transmembrane segment, and a 141 aa cytoplasmic tail (2, 3). The ECD of mouse Layilin shares 85%, 70%, and 77% aa sequence identity with that of hamster, rat, and human Layilin, respectively. The ECD includes one carbohydrate recognition domain that contains a single potential Ca⁺⁺-binding site (3). The intracellular region contains three types of LH (Layilin Homology) repeats: three 16-18 aa LH1 repeats, three 5 aa LH2 repeats, and one 4 aa LH3 repeat (3). Adjacent LH2-LH3 tandem arrays provide docking sites for the actin cytoskeleton adaptor proteins talin, merlin, and radixin (3, 4, 5). Layilin interacts with the ubiquitous extracellular matrix component hyaluronan but not with heparin, chondroitin sulfate, or N-acetyl glucosamine (6). Layilin is widely expressed and localizes to ruffling edges in spreading and migrating cells (3, 5). It does not localize to focal contacts and does not interact with the focal contact proteins α-actinin, vinculin, tensin, paxillin, tubulin, or Integrin β1 (3).

References:

1. McGreal, E.P. *et al.* (2004) *Mol. Immunol.* **41**:1109.
2. Genbank Accession # XP_146887.
3. Borowsky, M.L. and R.O. Hynes (1998) *J. Cell Biol.* **143**:429.
4. Rees, D.J.G. *et al.* (1990) *Nature* **347**:685.
5. Bono, P. *et al.* (2005) *Exp. Cell Res.* **308**:177.
6. Bono, P. *et al.* (2001) *Mol. Biol. Cell* **12**:891.