Human Layilin Antibody

Monoclonal Mouse IgG_{2B} Clone # 328002

Catalog Number: MAB26371

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Layilin in ELISAs.
Source	Monoclonal Mouse IgG_{2B} Clone # 328002
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Layilin Ala22-Glu220 Accession # NP_849156
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.*

Human Layilin Sandwich Immunoassay		**Reagent**
ELISA Capture	2-8 µg/mL	Human Layilin Antibody (Catalog # MAB26371)
ELISA Detection	0.1-0.4 µg/mL	Human Layilin Biotinylated Antibody (Catalog # BAF2637)
Standard		Recombinant Human Layilin (Catalog # 2536-LA)

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 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.** ● 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 six amino acid motif in the molecule's transmembrane segment) is a 55 kDa member of the animal C-type lectin family. The human Layilin cDNA encodes a 374 amino acid (aa) type I transmembrane protein that, based on the orthologous molecule in hamster, contains a 19 aa signal sequence, a 201 aa extracellular region, a 31 aa transmembrane segment, and a 123 aa cytoplasmic tail (1, 2). The extracellular domain has a 130 aa carbohydrate recognition domain that contains only one potential Ca^{++}-binding site. The intracellular region contains three types of LH (layilin homology) repeats. There are three 16-18 aa LH1 repeats, 3 five aa (E-G-S-F/W-V) LH2 repeats, and 2 four aa (N-D/E-I-Y) LH3 repeats. Adjacent LH2-LH3 tandem arrays provide docking sites for talin, a cytoskeleton-membrane adaptor protein (3). The human layilin extracellular region is 85% aa identical to the hamster layilin extracellular region, and 82% aa identical to the extracellular region of a similar molecule identified in mouse. Layilin is known to be a receptor for hyaluronan (HA), a negatively charged linear high molecular weight polysaccharide composed of alternating units of D-glucuronic acid and N-acetyl-D-glucosamine (1, 4, 5). HA is found in the extracellular matrix of most animal tissues and in body fluids. Thus, it may be that layilin modulates cell behavior and functions during tissue remodeling, development, homeostasis, and disease. Layilin binds specifically to HA but not to other glycosaminoglycans (4).

References:

1. Strausberg, R. (2002) GenBank Accession # AAH25407.
2. Borowsky, M.L. and R.O. Hynes (1998) J. Cell Biol. **143**:429.
3. Rees, D.J.G. *et al.* (1990) Nature **347**:685.
4. Bono, P. *et al.* (2001) Mol. Biol. Cell **12**:891.
5. Goa, K.L. and P. Benfield (1994) Drugs **47**:536.

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