Technical Data Sheet

Purified Mouse Anti-LR11

Product Information

Material Number: Alternate Name: Size: Concentration: Clone: Immunogen: Isotype: Reactivity:

Target MW: Storage Buffer:

612633

SorLA; gp250; Lipoprotein Receptor-11 50 μg 250 μg/ml 48/LR11 Human LR11 aa. 1220-1337 Mouse IgG2a Drosophila Tested in Development: Human, Rat, Mouse 250 kDa Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.

Description

The low-density lipoprotein receptor (LDLR) functions in lipoprotein transport pathways, and is involved in familial hypercholesterolemia. Homologues of the LDLR may have diverse functions and their ligands may include biological inactive plasma carrier complexes, plasma lipoproteins, yolk precursors, toxins, and extracellular lipoproteins. LR11 (also known as sorLA-1 and gp250) is a lipoprotein receptor homologue that contains 11 LDL receptor ligand binding repeats (LDLRs), 5 LDL receptor "YWTD"repeats, a large fibronectin-type III (FIII) hexarepeat domain similar to neural adhesion proteins, and a domain with similarity to the yeast receptor for vacuolar protein sorting (Vsp10p). LR11mRNA is expressed at high levels in brain, but is also found in liver, pancreas, adrenal gland, and testis. LR11 can bind the ER and Golgi localized receptor associated protein (RAP), which binds to many members of the LDLR family and prevents aggregation of ligands to the LDLRs. In addition, LR11 binds apolipoprotein E-containing lipoproteins. Thus, LR11 is a lipoprotein binding receptor that may have additional functions related to protein sorting and neuronal development.



Western blot analysis of gp250. Lysates from rat cerebrum (5 µg/lane), S2 cells (7.5 µg/lane), and 0-12 hours Drosophila embryos (7.5 µg/lane) were probed with anti-gp250 at concentrations of 0.5 µg/ml (lane 1), 0.25 µg/ml (lane 2), and 0.125 µg/ml (lane 3). Anti-gp250 detects a band of ~250 kDa in S2 cells and a 250 kDa plus a 200 kDa in rat cerebrum and Drosophila embryos.





gp250 immunochemical staining of 0-12 hour embryos. Formalin-fixed embryos kept in ethanol at -20°C, were re-hydrated and incubated with anti-gp250 at 1 µg/ml in TBST. After extensive washes to remove unbound antibody, gp250 signal was visualized with ALEXA fluor 488 secondary antibody (1/300) and confocal microscopy. (Left) gp250 staining is found troughout the the cellularizing embryo both in the cytoplasm and and somewhat higher levels in the nucleus. (Right) In later stage embryos, gp250 staining is mostly nuclear.

Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography. Store undiluted at -20°C.

Application Notes

Application					
Western blot	Routinely Tested				
Immunohistochemistry	Tested During Development				

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Recommended Assay Procedure:
>gb AAF46494 1 (AE003447) CG12139 gene product [Drosophila melanogaster] Length = 1952
Score = 102 bits (253) Expect = $3e_2 23$
Identities = 52/121 (42%), Positives = 67/121(54%), Gaps = 11/121 (9%)
Query: 1 DTDCQDGSDEDPVNCEKKCNGFRCPNGTCIPSSKHCDGLRDCSDGSDEQHCEPLCTHF 58
+ DC+DGSDE + C F+C N C PS+ CDG+ DC D SDEQ+C+ C
Sbjct: 3465 EKDCKDGSDEPATCAPRHCRAGTFQCKNTNCTPSATICDGVDDCGDRSDEQNCDLPCP-L 352
Query: 59 MDFVCKNRQQCLFHSMVCDGIIQCRDGSDEDAAFAGCSQDPEFHKVCD-EFGFQCQNGVC 117
Sbjct: 3524 SDFKCKSSGRCILDSWRCDGDADCKDGSDEDPAVCFKRTCDPKTEFSCKNGRC 357
Query: 118 I 118
Sbjct: 3577 I 3577

The Drosophila melanogaster gene CG12139 encodes a low-density lipoprotein receptor. Its amino acid sequence contains a calcium-binding EGF-like domain. Similar sequences have been identified in C. elegans, Homo sapiens, Mus musculus, and Xenopus laevis. It has been mapped cytologically to 8E3. [FBgn0030130] (The FlyBase Consortium (http://flybase.org/)).

Suggested Companion Products

Catalog Number	Name	Size	Clone
554002	HRP Goat Anti-Mouse Ig	1.0 ml	(none)
611463	Rat Cerebrum Lysate	500 µg	(none)

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.

- 2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
- 3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before
- discarding to avoid accumulation of potentially explosive deposits in plumbing.
- 4. Source of all serum proteins is from USDA inspected abattoirs located in the United States.

References

Jacobsen L, Madsen P, Moestrup SK. Molecular characterization of a novel human hybrid-type receptor that binds the alpha2-macroglobulin receptor-associated protein. J Biol Chem. 1996; 271(49):31379-31383.(Biology)

Posse De Chaves EI, Vance DE, Campenot RB, Kiss RS, Vance JE. Uptake of lipoproteins for axonal growth of sympathetic neurons. *J Biol Chem.* 2000; 275(26):19883-19890.(Biology)

Yamazaki H, Bujo H, Kusunoki J. Elements of neural adhesion molecules and a yeast vacuolar protein sorting receptor are present in a novel mammalian low density lipoprotein receptor family member. J Biol Chem. 1996; 271(40):24761-24768. (Biology)