

Product datasheet for MC227182

Lpar1 (NM_001290486) Mouse Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Lpar1 (NM_001290486) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Lpar1
Synonyms:	Al326300; Edg2; Gpcr26; Kdt2; lpA1; vzg-1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Fully Sequenced ORF:	>MC227182 representing NM_001290486 Red=Cloning site Blue=ORF Orange=Stop codon

TTTGTAAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGATCGC**

ATGAACGAACAACAGTGTCTTCTACAATGAGTCTATCGCCTTCTTTTATAACCGGAGTGGGAAATATCTAG
 CCACAGAATGGAACACAGTGAGCAAGCTGGTGATGGGACTGGGCATCACTGTTTGCCTGTTTCATCATGTT
 GGCCAATCTCTGGTCATGGTGGCAATCTACGTCAACCGCGCTTCCATTTCCCTATTTATTACTTGATG
 GCCAACCTGGCTGCTGCAGACTTCTTCGCTGGATTGGCCTACTTCTACCTGATGTTCAATACAGGACCTA
 ATACCCGGAGACTGACTGTTAGCACGTGGCTCCTCCGGCAGGGCCTCATTGACACCAGCCTGACAGCTTC
 TGTGGCCAACCTGCTGGCTATTGCTATCGAGAGGCACATCACGGTTTTCCGCATGCAGCTCCATACACGA
 ATGAGCAACCGCGCGTGGTGGTGGTGATTGTAGTCATCTGGACTATGGCCATTGTGATGGGTGCTATAC
 CCAGTGTGGGCTGGAACCTGCATCTGTGATATCGATCACTGTTCCAACATGGCACCCCTCTACAGTGACTC
 CTACTTAGTCTTCTGGGCCATTTTCAACCTGGTGACCTTTGTGGTCATGGTGGTTCTCTACGCTCACATC
 TTTGGCTATGTTCCGACAGGAGACTATGAGGATGTCTCGGCATAGTTCTGGACCCAGGAGGAATCGGGACA
 CCATGATGAGCCTTCTGAAGACTGTGGTCATTGTGCTTGGTGCCTTTATTGTCTGCTGGACTCCGGGATT
 GGTCTTGTTATTGCTGGATGTGTGCTGCCCGCAGTGCGATGTCTGGCCTATGAGAAGTTCTTCTCCTC
 CTGGCCGAGTTCAACTCTGCTATGAACCCCATCATCTACTCCTACCGCGACAAAGAGATGAGCGCCACCT
 TCAGGCAGATCCTGTGTTGCCAGCGCAACGAGAACCCTAATGGCCCCACGGAAGGCTCTGACCGCTCTGC
 CTCCTCCCTCAACCACACCATTTCTGGCTGGAGTTCACAGCAACGACCACTCTGTGGTT**AG**

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: SgfI-MluI



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ACCN:	NM_001290486
Insert Size:	1041 bp
OTI Disclaimer:	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
OTI Annotation:	Clone contains native stop codon, and expresses the complete ORF without any c-terminal tag.
Components:	The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).
Reconstitution Method:	<ol style="list-style-type: none"> 1. Centrifuge at 5,000xg for 5min. 2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA. 3. Close the tube and incubate for 10 minutes at room temperature. 4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom. 5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.
Note:	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
RefSeq:	<u>NM_001290486.1</u> , <u>NP_001277415.1</u>
RefSeq Size:	3247 bp
RefSeq ORF:	1041 bp
Locus ID:	14745
UniProt ID:	<u>P61793</u>
Cytogenetics:	4 32.2 cM

Gene Summary:

Receptor for lysophosphatidic acid (LPA) (PubMed:11087877, PubMed:18066075). Plays a role in the reorganization of the actin cytoskeleton, cell migration, differentiation and proliferation, and thereby contributes to the responses to tissue damage and infectious agents. Activates downstream signaling cascades via the G(i)/G(o), G(12)/G(13), and G(q) families of heteromeric G proteins (PubMed:8922387, PubMed:9600933, PubMed:11040035, PubMed:18157949, PubMed:18066075, PubMed:23478264). Signaling inhibits adenylyl cyclase activity and decreases cellular cAMP levels (PubMed:11040035, PubMed:12215548). Signaling triggers an increase of cytoplasmic Ca(2+) levels (PubMed:12215548). Activates RALA; this leads to the activation of phospholipase C (PLC) and the formation of inositol 1,4,5-trisphosphate (PubMed:11040035, PubMed:12215548, PubMed:23478264). Signaling mediates activation of down-stream MAP kinases (PubMed:11040035). Contributes to the regulation of cell shape (PubMed:8922387, PubMed:9600933, PubMed:11040035, PubMed:11087877). Promotes Rho-dependent reorganization of the actin cytoskeleton in neuronal cells and neurite retraction (PubMed:9600933, PubMed:11040035, PubMed:12181339). Promotes the activation of Rho and the formation of actin stress fibers (PubMed:9600933, PubMed:12215548). Promotes formation of lamellipodia at the leading edge of migrating cells via activation of RAC1 (PubMed:23478264). Through its function as lysophosphatidic acid receptor, plays a role in chemotaxis and cell migration, including responses to injury and wounding (PubMed:11087877, PubMed:18066075, PubMed:23478264). Plays a role in triggering inflammation in response to bacterial lipopolysaccharide (LPS) via its interaction with CD14 (PubMed:21821728). Promotes cell proliferation in response to lysophosphatidic acid (PubMed:9600933, PubMed:11087877, PubMed:12215548, PubMed:18157949, PubMed:17692995, PubMed:23478264). Required for normal skeleton development (PubMed:21569876). May play a role in osteoblast differentiation (PubMed:21569876). Required for normal brain development (PubMed:17656621, PubMed:18708146). Required for normal proliferation, survival and maturation of newly formed neurons in the adult dentate gyrus (PubMed:18708146). Plays a role in pain perception and in the initiation of neuropathic pain (PubMed:15195086, PubMed:19689455).[UniProtKB/Swiss-Prot Function]

Transcript Variant: This variant (3) contains an alternate 5' terminal exon and initiates translation at a downstream start codon, compared to variant 2. It encodes isoform 2, which has a shorter N-terminus, compared to isoform 1. Sequence Note: This RefSeq record was created from transcript and genomic sequence data to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on transcript alignments.