

Product datasheet for **MR229393**

Lpar1 (NM_001290486) Mouse Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
Product Name: Lpar1 (NM_001290486) Mouse Tagged ORF Clone
Tag: Myc-DDK
Symbol: Lpar1
Synonyms: AI326300; Edg2; Gpcr26; Kdt2; lpA1; vzg-1
Vector: pCMV6-Entry (PS100001)
E. coli Selection: Kanamycin (25 ug/mL)
Cell Selection: Neomycin
ORF Nucleotide Sequence: >MR229393 representing NM_001290486
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**GCGATCGCC**

ATGAACGAACAACAGTGTCTTCTACAATGAGTCTATCGCCTTCTTTTATAACCGGAGTGGAAATATCTAG
CCACAGAATGGAACACAGTGAGCAAGCTGGTGATGGGACTGGGCATCACTGTTTGGCGTTCATCATGTT
GGCCAATCTCCTGGTCATGGTGGCAATCTACGTCAACCGCGCTCCATTTCCCTATTTACTTGTATG
GCCAACCTGGCTGCTGCAGACTTCTTCGCTGGATTGGCCTACTTCTACCTGATGTTCAATACAGGACCTA
ATACCCGGAGACTGACTGTTAGCACGTGGCTCCTCCGGCAGGGCCTCATTGACACCAGCCTGACAGCTTC
TGTGGCCAACCTGCTGGCTATTGCTATCGAGAGGCACATCACGGTTTTCCGCATGCAGCTCCATACACGA
ATGAGCAACCGGCGCGTGGTGGTGGTATTGTAGTCATCTGGACTATGGCCATTGTGATGGGTGCTATAC
CCAGTGTGGGCTGGAAGTGCATCTGTGATATCGATCACTGTTCCAACATGGCACCCCTCTACAGTGACTC
CTACTTAGTCTTCTGGGCCATTTCAACCTGGTGACCTTTGTGGTCATGGTGGTTCTCTACGCTCACATC
TTTGGCTATGTTCCGAGAGGACTATGAGGATGTCTCGGCATAGTCTGGACCCAGGAGGAATCGGGACA
CCATGATGAGCCTTCTGAAGACTGTGGTCATTGTGCTTGGTCCCTTTATTGTCTGCTGGACTCCGGGAT
GGTCTTGTATTGCTGGATGTGTGCTGCCCGCAGTGCATGTCCCTGGCCTATGAGAAGTCTTCCCTCCTC
CTGGCCGAGTTCAACTCTGCTATGAACCCATCATCTACTCCTACCGCGACAAAGAGATGAGCGCCACCT
TCAGGCAGATCCTGTGTTGCCAGCGCAACGAGAACCCTAATGGCCCCACGGAAGGCTCTGACCGCTCTGC
CTCCTCCCTCAACCACACCATTCTGGCTGGAGTTCACAGCAACGACCACTCTGTGGTT

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >MR229393 representing NM_001290486
Red=Cloning site Green=Tags(s)

MNEQQCFYNESIAFFYNRSKGKYLATEWNTVSKLVMGLGITVCFVIMLANLLVMVAIYVNRFRHFPIYYLM
 ANLAAADFFAGLAYFYLMFNTGPNTRRLTVSTWLLRQGLIDTSLTASVANLLAIAIERHITVFRMQLHTR
 MSNRRVVVVIVVIWMTAIVMGAIPSVGWNCICDIDHCSNMAPLYSDSYLVFVAIFNLVTFVVMVLYAHI
 FGYYRQRTMRMSRHSSGPRRRNRDTMMSLLKTVVIVLGFIVCWTPLVLLLLDVCCPQCDVLAYEKFFLL
 LAEFNSAMNPIIYSYRDKEMSATFRQILCCQRNENPNGPTEGSDRSASSLNHTILAGVHSNDHSVV

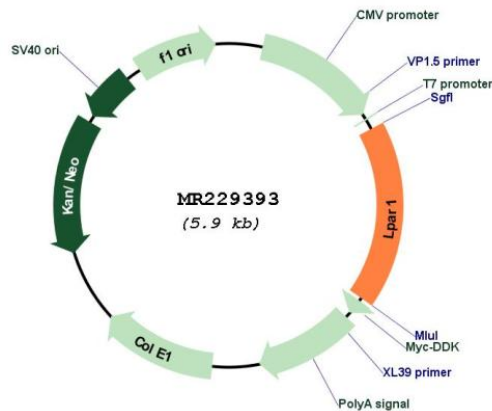
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites: SgfI-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM_001290486

ORF Size: 1038 bp

OTI Disclaimer:	The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. More info
OTI Annotation:	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
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.
RefSeq:	NM_001290486.1 , NP_001277415.1
RefSeq Size:	3247 bp
RefSeq ORF:	1041 bp
Locus ID:	14745
UniProt ID:	P61793
Cytogenetics:	4 32.2 cM
MW:	39.8 kDa

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]