

Product datasheet for **MR226281L4V**

Lpar1 (NM_010336) Mouse Tagged ORF Clone Lentiviral Particle

Product data:

Product Type:	Lentiviral Particles
Product Name:	Lpar1 (NM_010336) Mouse Tagged ORF Clone Lentiviral Particle
Symbol:	Lpar1
Synonyms:	AI326300; Edg2; Gpcr26; Kdt2; lpA1; vzg-1
Mammalian Cell Selection:	Puromycin
Vector:	pLenti-C-mGFP-P2A-Puro (PS100093)
Tag:	mGFP
ACCN:	NM_010336
ORF Size:	1092 bp
ORF Nucleotide Sequence:	The ORF insert of this clone is exactly the same as(MR226281).
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.
RefSeq:	NM_010336.2 , NP_034466.2
RefSeq Size:	3362 bp
RefSeq ORF:	1095 bp
Locus ID:	14745
UniProt ID:	P61793
Cytogenetics:	4 32.2 cM



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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]