Datasheet for ABIN7563496

# LPAR1 Protein (AA 1-364) (His tag)

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## Overview

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| Quantity: | 1 mg |
| Target: | LPAR1 |
| Protein Characteristics: | AA 1-364 |
| Origin: | Mouse |
| Source: | HEK-293 Cells |
| Protein Type: | Recombinant |
| Purification tag / Conjugate: | This LPAR1 protein is labelled with His tag. |

## Product Details

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| Purpose: | Custom-made recombinant Lpar1 Protein expressed in mammalian cells. |
| Sequence: | MAAASTSSPV ISQPQFTAMN EQQCFYNESI AFFYNRSGKY LATEWNTVSK LVMGLGITVC VFIMLANLLV MVAIYVNRRF HFPIYYLMAN LAAADFFAGL AYFYLMFNTG PNTRRLTVST WLLRQGLIDT SLTASVANLL AIAIERHITV FRMQLHTRMS NRRVVVVIVV IWTMAIVMGA IPSVGWNCIC DIDHCSNMAP LYSDSYLVFW AIFNLVTFVV MVVLYAHIFG YVRQRTMRMS RHSSGPRRNR DTMMSLLKTV VIVLGAFIVC WTPGLVLLLL DVCCPQCDVL AYEKFFLLLA EFNSAMNPII YSYRDKEMSA TFRQILCCQR NENPNGPTEG SDRSASSLNH TILAGVHSND HSVV **Sequence without tag. The proposed Purification-Tag is based on experiences with the expression system, a different complexity of the protein could make another tag necessary. In case you have a special request, please contact us.** |
| Specificity: | If you are looking for a specific domain and are interested in a partial protein or a different isoform, please contact us regarding an individual offer. |
| Characteristics: | Key Benefits: |

## Product Details

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| | • Made to order protein - from design to production - by highly experienced protein experts.<br>• Protein expressed in mammalian cells and purified in one-step affinity chromatography<br>• The optimized expression system ensures reliability for intracellular, secreted and transmembrane proteins.<br>• State-of-the-art algorithm used for plasmid design (Gene synthesis).<br><br>This protein is a made-to-order protein and will be made for the first time for your order. Our experts in the lab try to ensure that you receive soluble protein.<br><br>If you are not interested in a full length protein, please contact us for individual protein fragments.<br><br>The big advantage of ordering our made-to-order proteins in comparison to ordering custom made proteins from other companies is that there is no financial obligation in case the protein cannot be expressed or purified. |
| Purity: | > 90 % as determined by Bis-Tris PAGE, anti-tag ELISA, Western Blot and analytical SEC (HPLC) |
| Grade: | custom-made |

## Target Details

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| Target: | LPAR1 |
| Alternative Name: | Lpar1 (LPAR1 Products) |
| Background: | Lysophosphatidic acid receptor 1 (LPA receptor 1) (LPA-1) (Lysophosphatidic acid receptor Edg-2) (Rec1.3) (VZG-1),FUNCTION: 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 |

## Target Details

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| | 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 LPA 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 LPA (PubMed:9600933, PubMed:11087877, PubMed:12215548, PubMed:18157949, PubMed:17692995, PubMed:23478264). Inhibits the intracellular ciliogenesis pathway in response to LPA and through AKT1 activation (By similarity). 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). {ECO:0000250\|UniProtKB:Q92633, ECO:0000269\|PubMed:11040035, ECO:0000269\|PubMed:11087877, ECO:0000269\|PubMed:12181339, ECO:0000269\|PubMed:12215548, ECO:0000269\|PubMed:15195086, ECO:0000269\|PubMed:17656621, ECO:0000269\|PubMed:17692995, ECO:0000269\|PubMed:18066075, ECO:0000269\|PubMed:18157949, ECO:0000269\|PubMed:18708146, ECO:0000269\|PubMed:19689455, ECO:0000269\|PubMed:21569876, ECO:0000269\|PubMed:23478264, ECO:0000269\|PubMed:8922387, ECO:0000269\|PubMed:9600933}. |
| Molecular Weight: | 41.1 kDa |
| UniProt: | P61793 |
| Pathways: | Myometrial Relaxation and Contraction, Smooth Muscle Cell Migration |

## Application Details

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| Application Notes: | We expect the protein to work for functional studies. As the protein has not been tested for functional studies yet we cannot offer a guarantee though. |
| Restrictions: | For Research Use only |

## Handling

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| Format: | Liquid |
| Buffer: | The buffer composition is at the discretion of the manufacturer. |
| Handling Advice: | Avoid repeated freeze-thaw cycles. |
| Storage: | -80 °C |
| Storage Comment: | Store at -80°C. |
| Expiry Date: | 12 months |