

Product datasheet for **MR219497**

Lgr4 (NM_172671) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Lgr4 (NM_172671) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Lgr4
Synonyms:	9130225G07; A330106J01Rik; A930009A08Rik; Gpr48
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>MR219497 representing NM_172671
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGCCGGGCCGCTGCGGCTGCTCTGCTTCTTCGCCCTGGGGCTGCTCGGCTCGGCCGGGCCAGCGGG
 CGGCGCCACCTCTCTGCGCTGCGCCTGCAGCTGCGACGGCGACCGTCCGGTGGACTGCTCCGGGAAGG
 GTTGACGGCGGTACCGGAGGGGCTCAGCGCCTCACCCAAGCACTGGATATCAGTATGAACAATATCACT
 CAGTTACCAGAAGATGCATTTAAGAATTTTCCTTTCTAGAGGAGCTACAACCTGGCTGGTAAACGACCTTT
 CTTTTATCCACCAAAAAGCCTTGTCTGGGTTGAAAGAAGCTCAAAGTCTAACCTCCAGAACAATCAGTT
 GAAAACAGTACCCAGTGAAGCCATTCTGGGACTGAGTGTTCAGTCTCTACGCTTAGATGCCAACCAT
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 CTGCTTCCCCCTTTTACCGGAGGGCAATATTCTGCATCACCTTGTGCTTGCATTTCTACAGGAGAG
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 GAAGAGGATTCCTTTGTCTCGGACAGCTCTGACCAGGTGCAGGCCTGTGGACGAGCTGCTTCTACCAGA
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ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >MR219497 representing NM_172671
 Red=Cloning site Green=Tags(s)

MPGPLRLLCFFALGLLGSAGPSGAAPPLCAAPCSCDGRRVDCSGKGLTAVPEGLSAFTQALDISMNNIT
 QLPEDAFKNPFLEELQLAGNDLSFIHPKALSGLKELKVLTLQNNQLKTPSEAIRGLSALQSLRLDANH
 ITSVPEDSFEGLVQLRHLWLDNILETEVPVRPLSNLPTLQALTLALNNISSIPDFAFTNLSSLVVLHLHN
 NKIKLSQHCDFGLDNLETLDLNYYNLDDEFPQAIAKALPSLKEGFGHSNSISVIPDGAFAFNPLLRTHLY
 DNPLSFVGNFAFHNLSDLHSLVIRGASLVQWFPNLAGTVHLESLLTGTGKISSIPDDLQCNQKMLRDL
 SYNDIRDLPSFNGCRALIEISLQRNQISLIKETTQGLTSLRILDLSRNLIREIHSAGFAKLGITINLQDV
 SFNELTSFPTEGLNGLNQLKLVGNFQLKDALAARDFANLRSLVSPYAYQCCAFWGCDSYANLNTEDNSPQ
 DHSVTKEKGATDAANATSTAESEHSQIIHCTPSTGAFKPEYLLGSMIRLTVWFIFLVALLFNLLVI
 LTVFASCSLPAKLFIGLISVSNLLMGIYTGILTFLDVSWGRFAEFGIWWETGSGCKVAGSLAVFSSE
 SAVFLLTLAAVERSVFAKDVMMKNGKSSHLRQFQVAALVALLGAAIAGCFPLFHGGQYSASPLCLPFPTGE
 TPSLGFVTVLVLLNSLAFLLMAIIYTKLYCNLEKEDPSENSQSSMIKHVAWLIFTNCIFFCPVAFFSFAP
 LITAISISPEIMKSVTLIFFPLPACLNPVLYVFNPKFKDDWKLKRRVTRKHGSVSVSISQGGCGEQD
 FYYDCGMYSHLQGNLTVCCCEFLTKPVSKHLIKSHSCPVLTVASCQRPEAYWSDCGTQSAHSDYAD
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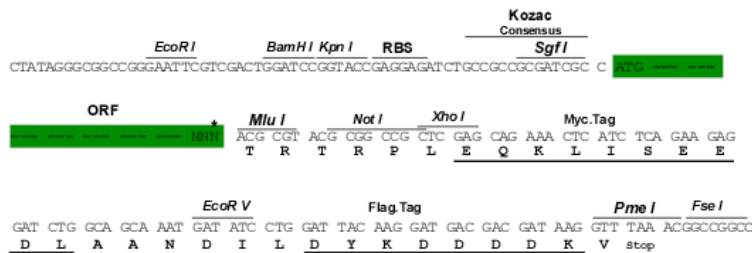
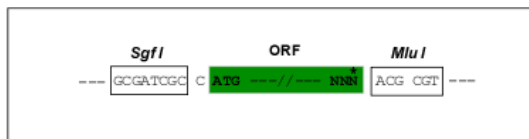
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mm9012_c12.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

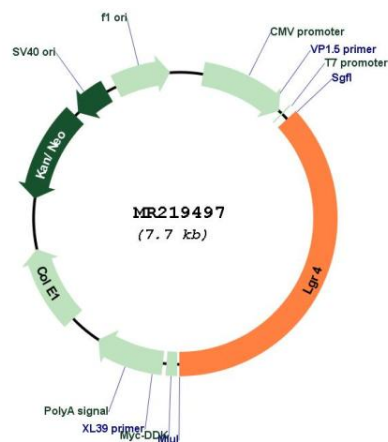
ACCN: NM_172671

ORF Size: 2853 bp

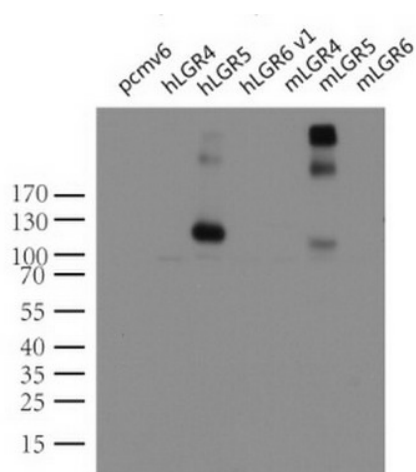
OTI Disclaimer:	The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially 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_172671.2 , NP_766259.2
RefSeq Size:	5066 bp
RefSeq ORF:	2856 bp
Locus ID:	107515
UniProt ID:	A2ARI4
Cytogenetics:	2 E3
MW:	104.6 kDa

Gene Summary:

Receptor for R-spondins that potentiates the canonical Wnt signaling pathway and is involved in the formation of various organs. Upon binding to R-spondins (RSPO1, RSPO2, RSPO3 or RSPO4), associates with phosphorylated LRP6 and frizzled receptors that are activated by extracellular Wnt receptors, triggering the canonical Wnt signaling pathway to increase expression of target genes. In contrast to classical G-protein coupled receptors, does not activate heterotrimeric G-proteins to transduce the signal. Its function as activator of the Wnt signaling pathway is required for the development of various organs, including liver, kidney, intestine, bone, reproductive tract and eye. May also act as a receptor for norrin (NDP), such results however require additional confirmation in vivo. Required during spermatogenesis to activate the Wnt signaling pathway in peritubular myoid cells. Required for the maintenance of intestinal stem cells and Paneth cell differentiation in postnatal intestinal crypts. Acts as a regulator of bone formation and remodeling. Involved in kidney development; required for maintaining the ureteric bud in an undifferentiated state. Involved in the development of the anterior segment of the eye. Required during erythropoiesis. Also acts as a negative regulator of innate immunity by inhibiting TLR2/TLR4 associated pattern-recognition and proinflammatory cytokine production. Plays an important role in regulating the circadian rhythms of plasma lipids, partially through regulating the rhythmic expression of MTTP (PubMed:24353284).[UniProtKB/Swiss-Prot Function]

Product images:


Circular map for MR219497



Western blot analysis of extracts (10ug) from 7 different transiently transfected HEK293T cell lysates by using anti-LGR5 monoclonal antibody (Cat# [UM800104]). Lanes: control vector pCMV6-Entry (Cat# [PS100001]); human LGR4 (Cat# [RC221345]), LGR5 (Cat# [RC212825]) and LGR6 (Cat# [RC219284]), and mouse LGR4 (Cat# MR219497), LGR5 (Cat#[MR219702]) and LGR6 (Cat# [MR224646]).