

Product datasheet for **RR202738**

Lgr5 (NM_001106784) Rat Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Lgr5 (NM_001106784) Rat Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Lgr5
Synonyms:	Gpr49
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RR202738 representing NM_001106784
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGGACACCTCCCGCTCCGCATGCTCCTGTCTTGTGCGCTGCTGCAGCTGGTGGCTGCCGGCAGCC
 CACCGAGACCGGACACGATGCCGCGGGCTGCCATCATACTGTCACTGTGAGCTGGATGGCAGGATGCT
 GCTCAGGGTGGACTGCTCCGACCTGGGGCTCTCGGAGCTGCCCTCCAACCTCAGCGTCTTACCTCTAC
 CTGGACCTCAGTATGAACAACATCAGTCAGCTACCTGCCAGTCTCCTGCATCGCCTCCGCTTCTAGAAG
 AGTTGCGTCTTGTGGAAATGCTTTGACACACATCCCAAGGGAGCATTGCGAGGCTTACAGTCTCAA
 AGTTCTCATGCTGCAGAATAACAGCTGAGACAGGTTCCGGAGGAAGCGCTACAGAACCTGAGAAGCCTT
 CAGTCCCTGCGCTTGGATGCCAACACATCAGCTACGTGCCACCCAGCTGTTTCAGTGGTCTGCACTCCC
 TGAGGCACCTGTGGCTAGATGACAACGCTCTCACAGATGTCCCTGTCCAGGCTTTCAGAAGTTTATCAGC
 CCTGCAAGCCATGACCTTGGCCCTGAACAAAATACACCACATAGCAGACCATGCCTTTGAAACCTCTCC
 AGCCTCGTGGTTCTGCATCTCCATAATAATAGAATCCACTCCCTGGGAAAGAAATGCTTTGATGGACTCC
 ACAGCCTGGAGACTTTAGATTTAAATTATAATAACCTTGACGAATCCCCACTGCAATCAAGACACTCTC
 CAACCTCAAGGAAGTGGATTCCACAGCAACAATATCAGATCAATACCAGAGCGAGCATTTCGTAGGCAAC
 CCTTCTCTTATCACAATACATTTCTATGACAATCCCATCCAGTTTGTGGAAATCTCTGCTTTTCAACACT
 TGCTGAACTAAGAACGCTGACTTTGAATGGTGCCTCGCAAACTACTGAATCCCTGACTTAACGGGGAC
 CGCAACCTGGAGAGCCTGACTTTAACTGGAGCAAAGATCTCGTCTTCCCAAACCGTCTGTGATCAG
 TTACCTAATCTCCAAGTCTAGATTTGTCTTACAACCTGCTCGAAGACTTACCCAGTTTGTGGGCTGCT
 AAAAGCTTCAGAAAATTGACCTGGCATAATGAAATCTATGAAATTAAGGTGGCACTTTTCAGCAGTT
 GTTCAACCTCCGATCTCTGAACCTTAGCCCGGAATAAAATGCCATTATCACCCCAACGCTTTCTCTACG
 TTGCCGTCTTAATAAAGCTGGACCTATCATCCAACCTCCTTTCGTCTTCCCTGTGACTGGGTTACACG
 GTTAACTCACTTAAAATTAACGGGAACCGCGCCTTGCAGAGCCTGATACCATCTGCAAACTTCCCGGA
 GCTCAAGATTATAGAAATGCCATACGCTTACCAGTGTGTGCAATTTGGGGGTGTGAGAATGTCTATAAA
 ATTCTAATCAATGGAACAAAGATGACAGCAGCAGTGTGGACGACCTTCGTAAGAAAGATGCTGGCTTAT
 TTCAAGTTCAAGATGAGCGGGACCTTGAAGACTTCTACTTGACTTTGAGGAAGACCTGAAGTTCTTCA
 CTCGGTGCAGTGTCTCACCTCCCCAGTCCCTTCAAGCCCTGTGAGCACCTGTTTGGTAGCTGGCTGATC
 CGAATCGGGTGTGGACCACAGCAGTCTGGCGCTTTCCTGCAATGCCTTGGTGGCTTTCACAGTGTTC
 GAACCCCTCTGTACATCTTCCATAAACTGCTAATCGGGTAATTGCGGTAGTGGACATACTCATGGG
 GGTCTCCAGTGAATTTGGCTGTCTGGACACGTTCACTTTTGGCAGTTTGTCTAACACGGTGCATGG
 TGGGAAGTGGAAATGGCTGCCAAATGTTGGTTTTTGTCCATTTTGGTTCCGAATCATCGGTCTTCC
 TGCTCACTCTGGCGGCACTGGAACGTGGTTTTTCTGTCAAGTGTCTTCAAAGTTTGAATGAAAGCTCC
 CCTTCTAGCCTGAAAGCGATCATTGCTGTGTCTCTTGGCCCTGACCATTGCCACCGTCCCTTG
 CTAGGAGGCAGTGAATACAATGCCTCTCCCCTGTCCCTGCCCTTACCCTTGGGGAGCCAGCACACAG
 GCTACATGGTGGCTCTCGTATTGCTCAACTCCCTCTGTTTCTCATAATGACCATTGCCTATACAAGGCT
 CTACTGCAGTTTGGAGAAGGGAGAGCTGGAGAACCTTTGGGACTGTTCTATGGTGAAGCACACTGCTCTG
 TTGCTCTTACCACCTGTATCCTTTACTGCCCGTGGCTTCTTATCCTTCTCTCTTTGCTAAACCTCA
 CGTTTATCAGTCCGAAGTAATTAATTTATACTTCTAGTGATTGTCCCCTTCCGGCATGCCTCAACCC
 CCTTCTACATTGTCTTCAACCCCAATTTAAGGAGGATATGGGCAGCCTGGGAAAGCAAACCCGTTTC
 TGGACAAGAGCAAACACCCAAGTCTGTGTCCATTAACCGGACGATGTTGAGAAACGGTCTGTGACT
 CAACCCAAGCCTTAGTATCCTTTACCCACGCCAGCATAGCCTATGACTTGCCTTCCGATTCCGGGTATC
 ACCAGTTACCAATGACTGAAAGCTGTACCTCTCTTCAGTTGCATTTGCCATGTCTC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RR202738 representing NM_001106784
 Red=Cloning site Green=Tags(s)

MDTSRVRMLLSLLALLQLVAAGSPRPDTPRGPCSYCHCELDGRMLLRVDCSDLGSELPSNLSVFSTY
 LDLSMNNISQLPASLLHRLRFLEELRLAGNALTHIPKGAFAGLHSLKVLMLQNNQLRQVPEEALQNLRS
 QSLRLDANHISYVPPSCFSGLHSLRHLWDDNALTDVPVQAFRSLSALQAMTLALNKIHHIADHAFGNLS
 SLVVLHLHNNRIHSLGKKCFDGLHSELETLDLNYNNLDEFPTAIKTLSNLKEFGFHSNNIRSIPEAFVGN
 PSLITIHFYDNP IQFVGISAFQHLPELRTLTLNGASQITTEFPDLTGATLESRTLTKAKISSLPQTVCDQ
 LPNLQVLDLSYNLLEDLPSLSGCQKLQKIDLRHNEIYEIKGGTFQQLFNLRSNLARNKIAIIHPNAFST
 LPSLIKLDLSSNLLSSFVPTGLHGLTHLKLGNRALQSLIPSANFPELKIIEMPYAYQCCAFGGCENVYK
 IPNQWNKDDSSVDDLKRDAGLFQVQDERDLEDFLLDFEEDLKVLSVQCSPPPGPFKPCHELFSGSWLI
 RIGVWTTAVLALSCNALVAFTVFRTPLYISSIKLLIGVIAVVDILMGVSSAILAVVDTFTFGSFAQHAW
 WEGGIGCQIVGFLSIFASESSVLLTLAALERGFVKCSSKFEMKAPLSSLKAIILLCVLLALTIATVPL
 LGGSEYNASPLCLPLPFGEPTTGYMVALVLLNSLCFLIMTIAYTRYCSLEKGELENLWDCSMVKHTAL
 LLFTNCILYCPVAFLSFSSLLNLTFSPEVIKFIILLVIVPLPACLNPLLIVFNPHFKEDMGSLGKQTRF
 WTRAKHPSLLSINSDDVEKRSCDSTQALVSFTHASIAIDLPSDSGSSPAYPMTESCHLSSVAFVPCL

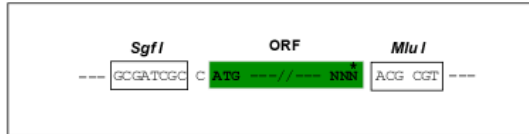
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/ja2729_a01.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

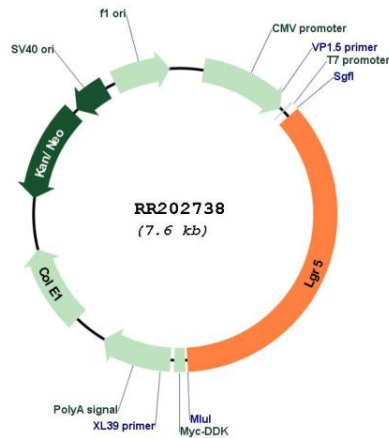
ACCN: NM_001106784

ORF Size:	2721 bp
OTI Disclaimer:	<p>Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.</p> <p>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</p>
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:	<u>NM_001106784.1</u> , <u>NP_001100254.1</u>
RefSeq Size:	3130 bp
RefSeq ORF:	2724 bp
Locus ID:	299802
UniProt ID:	<u>D4AC13</u>
Cytogenetics:	7q22
MW:	100 kDa

Gene Summary:

Receptor for R-spondins that potentiates the canonical Wnt signaling pathway and acts as a stem cell marker of the intestinal epithelium and the hair follicle. 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. Involved in the development and/or maintenance of the adult intestinal stem cells during postembryonic development (By similarity).[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for RR202738