

Product datasheet for MR219206

Ffar2 (NM_001168509) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Ffar2 (NM_001168509) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Ffar2
Synonyms:	GPCR43; Gpr43
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>MR219206 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGACCCAGACTGGCACAGTTCCTTGATCCTCACGGCCTACATCCTCATCTTTCTTACTGGGCTCCCTG
CCAACCTGCTGGCCCTGCGGGCCTTCATGGGCCGGGTTGCCAGCCTCAGCCTGCCCTGTGCACATCCT
CCTGCTTAATCTGACCCTGGCGGACTTGCTCCTGTTGCTGCTGCTGCCCTCCGGATCGTGAAGCAGCA
TCCAACCTCCGCTGGTACCTACCAAAGATCGTGTGCGCGCTGACAGGCTTCGGCTTCTACAGCAGCATCT
ACTGCAGCACGTGGCTGCTGGCGGGCATCAGCATGGAACGCTACCTGGGAGTGGCCTTCCGGTGCAGTA
CAAGTTATCCCGCCGGCCACTGTATGGAGTGATCGCTGCTCTGGTGGCCTGGATCATGTCCTTTGGCCAC
TGACCATCGTCATCATCGTTACAGTACCTGAACTCAACTGAGCAGGTGGGCACTGAGAACCAAAATACCT
GCTACGAGAACTTCAACCAAGAGCAGCTGGATGTGGTACTGCCGTACGACTGGAGCTGTGCCTGGTCTCT
GTTTTTCGTTCCCATGGCAGTACCATCTTCTGTTATTGGCGCTTCGTGTGGATCATGCTCACGCAGCCC
CACGTTGGGGCTCAGAGGCGACGCCGGCAGTGGGCTGGCTGTTGTGACGCTTCTTAATTTCTGGTGT
GCTTTGGACCCTACAACATGTCCACCTGGTGGGTTCTACCTGAGGCAGAGCCCTCGTGGCGGGTGA
GGCTGTGGTGTTCAGTTCCTCAATGCCAGCCTGGATCCATTATTGTTCTACTTCTCCTCCTCCGTGGTG
CGCAGAGCTTTTGGAAAGGTTTGTACTGATCCGCAATCCTGCCTCCTATGCTGGCAGGGGAGCCA
AAGAGACAGTGGAGGGGACCAAGATGGACAGGGGTGGAAGTCAAGCAGAAGGGGTACAGAGTTCTGAATT
TGTACCCGAG

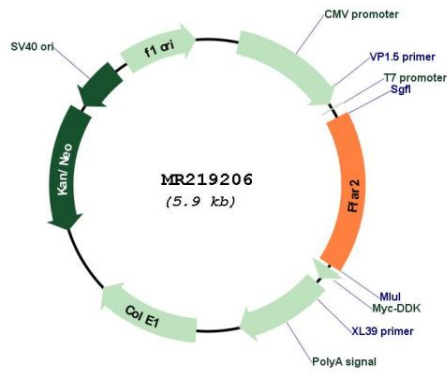
ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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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_001168509.1</u> , <u>NP_001161981.1</u>
RefSeq Size:	1969 bp
RefSeq ORF:	993 bp
Locus ID:	233079
UniProt ID:	<u>Q8VCK6</u>
Cytogenetics:	7 B1
MW:	37.1 kDa
Gene Summary:	<p>G protein-coupled receptor that is activated by a major product of dietary fiber digestion, the short chain fatty acids (SCFAs), and that plays a role in the regulation of whole-body energy homeostasis and in intestinal immunity. In omnivorous mammals, the short chain fatty acids acetate, propionate and butyrate are produced primarily by the gut microbiome that metabolizes dietary fibers. SCFAs serve as a source of energy but also act as signaling molecules. That G protein-coupled receptor is probably coupled to the pertussis toxin-sensitive, G(i/o)-alpha family of G proteins but also to the Gq family (PubMed:23589301). Its activation results in the formation of inositol 1,4,5-trisphosphate, the mobilization of intracellular calcium, the phosphorylation of the MAPK3/ERK1 and MAPK1/ERK2 kinases and the inhibition of intracellular cAMP accumulation. May play a role in glucose homeostasis by regulating the secretion of GLP-1, in response to short-chain fatty acids accumulating in the intestine (PubMed:22190648, PubMed:23589301). May also regulate the production of LEP/Leptin, a hormone acting on the central nervous system to inhibit food intake (PubMed:20399779). Finally, may also regulate whole-body energy homeostasis through adipogenesis regulating both differentiation and lipid storage of adipocytes (PubMed:16123168, PubMed:23589301). In parallel to its role in energy homeostasis, may also mediate the activation of the inflammatory and immune responses by SCFA in the intestine, regulating the rapid production of chemokines and cytokines (PubMed:23665276). May also play a role in the resolution of the inflammatory response and control chemotaxis in neutrophils (PubMed:19917676, PubMed:19865172). In addition to SCFAs, may also be activated by the extracellular lectin FCN1 in a process leading to activation of monocytes and inducing the secretion of interleukin-8/IL-8 in response to the presence of microbes.</p> <p>[UniProtKB/Swiss-Prot Function]</p>

Product images:



Circular map for MR219206