

Product datasheet for **SC207850**

FFAR3 (NM_005304) Human 3' UTR Clone

Product data:

Product Type: 3' UTR Clones
Product Name: FFAR3 (NM_005304) Human 3' UTR Clone
Vector: pMirTarget (PS100062)
Symbol: FFAR3
Synonyms: FFA3R; GPR41; GPR42
ACCN: NM_005304
Insert Size: 588 bp
Insert Sequence: >SC207850 3'UTR clone of NM_005304
The sequence shown below is from the reference sequence of NM_005304. The complete sequence of this clone may contain minor differences, such as SNPs.
Blue=Stop Codon **Red**=Cloning site

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GGCAAGTTGGACGCCCGCAAGATCCGCGAGATTCTCATTAAAGCCAAGAAGGGCGGAAAGATCGCCGTG
TAACAATTGGCAGAGCTCAGAATTCAAGCGATCGCC
GGTGGCCAGGTGGCCTGTGCTGAAAGCTAGGTCTCCGGGGAGGAGGGTGTAGCTGGCATGTCATCCT
CAGGGCGCTTCCCGCTCACGCCAGGAGGGACTTGGAGTGGCAGCTGGGGCCCGATGGGGCTTGGGGG
CAGAGTAGACATCTAGCCTCCCTAAGGGTATGCGCGCTAAAGCCAGCTCTCGATCTCACCTCCATCCC
CATCCACCCACACTATGGATTGGGCTCTGGGAAGGGGTGAGGGTGTAGAGGCTGCTCTGGAGAACAAT
GAGGTCTCATAGCAGCAGGCTCCTGTGTTTTCTTGAGGGTGGCAGAGGAGCTAAGAGCAGTGCCC
AGGGTCTGAGGGGGCTGCCAGTGAGTGGCAGGGGAGGAGAGGGGAGAAACCCCATCCTCAGAGCTGCT
CCCAGCCAGCGAGTCAGGAGCGGGGAGACAGGGCTCCAGGGATGAGGCCGATTCTGCTCCACAGCG
CCTTTTCCAGAAAGTTCCATTGCTCAATAAATGTGGATCATCAGAGACATTTATGAACAATGACAGAA
GAAAAATTACCAAATAAATGTGAAGCAAGCAAAA
ACGCGTAAGCGGCCGCGCATCTAGATTGAAGAAAATGACCGACCAAGCGACGCCAACCTGCCATCA
CGAGATTCGATTCCACCGCCGCTTCTATGAAAGG
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Restriction Sites: SgfI-MluI

OTI Disclaimer: Our molecular clone sequence data has been matched to the sequence identifier above as a point of reference. Note that the complete sequence of this clone is largely the same as the reference sequence but may contain minor differences, e.g., single nucleotide polymorphisms (SNPs).

Components: The cDNA clone is shipped in a 2-D bar-coded Matrix tube as 10 µg dried plasmid DNA. The package also includes 100 pmols of both the corresponding 5' and 3' vector primers in separate vials.



[View online »](#)

RefSeq: [NM_005304.5](#)

Summary: 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. 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 (PubMed:12711604). Activated by SCFAs and by beta-hydroxybutyrate, a ketone body produced by the liver upon starvation, it inhibits N-type calcium channels and modulates the activity of sympathetic neurons through a signaling cascade involving the beta and gamma subunits of its coupled G protein, phospholipase C and MAP kinases. Thereby, it may regulate energy expenditure through the control of the sympathetic nervous system that controls for instance heart rate. Upon activation by SCFAs accumulating in the intestine, it may also signal to the brain via neural circuits which in turn would regulate intestinal gluconeogenesis. May also control the production of hormones involved in whole-body energy homeostasis. May for instance, regulate blood pressure through renin secretion. May also regulate secretion of the PYY peptide by enteroendocrine cells and control gut motility, intestinal transit rate, and the harvesting of energy from SCFAs produced by gut microbiota. May also indirectly regulate the production of LEP/Leptin, a hormone acting on the CNS to inhibit food intake, in response to the presence of short-chain fatty acids in the intestine. Finally, may also play a role in glucose homeostasis. Besides its role in energy homeostasis, may play a role in intestinal immunity. May mediate the activation of the inflammatory and immune response by SCFAs in the gut, regulating the rapid production of chemokines and cytokines by intestinal epithelial cells. Among SCFAs, the fatty acids containing less than 6 carbons, the most potent activators are probably propionate, butyrate and pentanoate while acetate is a poor activator (PubMed:12496283, PubMed:12711604).[UniProtKB/Swiss-Prot Function]

Locus ID: 2865

MW: 20.8