

Product datasheet for **RR204101**

Fa2h (NM_001135583) Rat Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
 Product Name: Fa2h (NM_001135583) Rat Tagged ORF Clone
 Tag: Myc-DDK
 Symbol: Fa2h
 Synonyms: RGD1310347; Wdr59
 Mammalian Cell Selection: Neomycin
 Vector: pCMV6-Entry (PS100001)
 E. coli Selection: Kanamycin (25 ug/mL)
 ORF Nucleotide Sequence: >RR204101 representing NM_001135583
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGATCGCC**

ATGGCCCCGCTCCGCCCCCGCCGCTCCTTCACGTCCGCCGAGGTCCAGCGGCGCCTGGCGGCCGGTG
 CCTGCTGGGTCCGTCCGGGGCCAGTCTCTACGACCTCACCGGCTTCGTGCGGCATCATCCGGGGGCGA
 GCAGCTGCTGCTGGCGGGGCTGGCCAGGACATCAGTGCCGACCTGGATGGCCACCTCATAAACTCG
 GACAACGCTCGCCGCTGGCTGGAGCAGTACTATGTGGCGAACTGCGAGCGGACCCGAGGATCCCACAG
 AGAACGGTCTGGAGCCCTGCAGAGACTCAGAAGACAGATGCTGCTATTGAGCCACAGTTCAAAGTGGT
 AGACTGGGACAAGGACCTGGTGGACTGGCAGAACTCTCCTGTGGCAGGTGGGCCACTTGGGGGAAAAG
 TATGATGAGTGGGTTACCAACCTGTGGCCAGGCCATTCCGCTCTTCCACTCAGACCTCATCGAGGCC
 TCTCCAAGACTGTCTGGTATAGTGTCCCATCATCTGGGTGCCCTGGTCTGTACCTCAGCTGGTCCTA
 CTACCGAACCTCACCCAGGACAACATCCGGCTTTTTGCATATTACAAGAGATTATCACTTGTGGTG
 CCAGAGTCGGTGTTCATAGGCCTCTTCGTGTGGGCATGCTTATCTGGACTCTTGTGGAGTACCTCATCC
 ACCGCTTCCTGTCCACATGAAGCCCCCAGCAACAGCCATTACCTCATCATGCTGCATTTTGTGTCATGCA
 CGGACAGCACCACAAGGCACCTTTGATGGCTCCCGTCTGGTCTTCCCCCAGTGCCAGCCTCTGTAGTG
 GTGGCCTTTCTATGTGTTCTGCGGCTCATTGCTGCTGAGGCCGTGGCAGGCATCCTCTTTGCTGGGG
 GTCTTCTGGGCTATGTCCTCTATGACATGACCCATTACTACCTGCACTTTGGCTCACCTCACAAGGGCTC
 CTATCTGTACAACATGAAGGCCACCATGTCAAGCATCACTTCGAATACCAGAAATCAGGGTTTCGCATC
 AGCACTAACTGTGGATTACTTTTTCCACACCCTATTCCAGAGGAAGCCGACCCGAAGATGCAG

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTAA



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Protein Sequence: >RR204101 representing NM_001135583
 Red=Cloning site Green=Tags(s)

MAPAPPPAASFTSAEVQRRLAAGACWVRRGASLYDLTGFVRHHPGGEQLLLARAGQDISADLDGPPHKHS
 DNARRWLEQYYVGELRADPQDPTENGAGAPAETQKTDAAIEPQFKVVDWDKDLVDWQKPLLWQVGHLEK
 YDEWVHQPVARPIRLFHSDLIEAFSKTVWYSVPIIWWPLVLYLWSYRYRTLTDQNIRLFASFTRDYSLVV
 PESVFIGLFLVGLMIWTLVEYL IHRFLFHMKPPSNSHYLIMLHFVMHGQHHKAPFDGSRLLVFPVPASVV
 VAFFYVFLRLILPEAVAGILFAGLLGYLYDMTHYYLHFGSPHKGSYLYNMKAHHVKKHFFEYQKSGFGI
 STKLWDYFFHTLIPPEADPKMQ

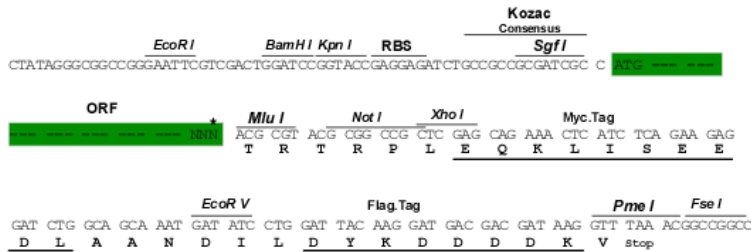
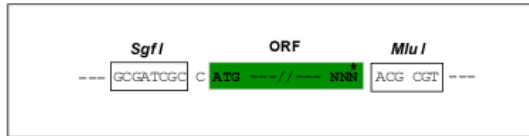
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

ACCN: NM_001135583

ORF Size: 1116 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:

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_001135583.1](#), [NP_001129055.1](#)

RefSeq Size: 2506 bp

RefSeq ORF: 1119 bp

Locus ID: 307855

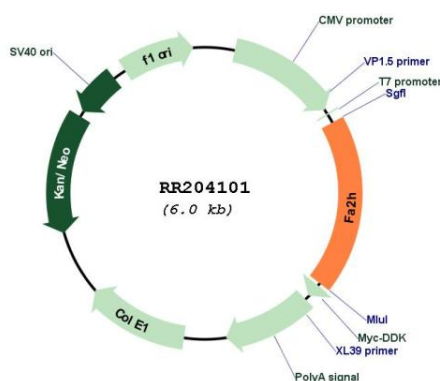
UniProt ID: [Q2LAM0](#)

Cytogenetics: 19q12

MW: 42.7 kDa

Gene Summary: Catalyzes stereospecific hydroxylation of free fatty acids at the C-2 position to produce (R)-2-hydroxy fatty acids, which are building blocks of sphingolipids and glycosphingolipids common in neural tissue and epidermis (By similarity). Plays an essential role in the synthesis of galactosphingolipids of the myelin sheath (PubMed:17901466). Responsible for the synthesis of sphingolipids and glycosphingolipids involved in the formation of epidermal lamellar bodies critical for skin permeability barrier (By similarity). Participates in the synthesis of glycosphingolipids and a fraction of type II wax diesters in sebaceous gland, specifically regulating hair follicle homeostasis (By similarity). Involved in the synthesis of sphingolipids of plasma membrane rafts, controlling lipid raft mobility and trafficking of raft-associated proteins (By similarity).[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for RR204101