

Product datasheet for MR206140

Pofut1 (NM_080463) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Pofut1 (NM_080463) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Pofut1
Synonyms:	mKIAA0180; O-FucT-1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>MR206140 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGGATCGCC**

ATGGGCGCCCGCGTGGGCACCGCCACACCTGCTGCTGCGGGCGTCTTTCCTGCTTCTGCTGCTGTTGC
TGCCGCTCCGCGGGCGGTGAGCGGGCTCTGGGACCTGGCCGGTTACCTGCTCTACTGTCCTGCATGGG
GCGCTTTGGGAACCAGGCTGATCACTTCTGGGCTCCCTGGCATTTCGGAAGCTGCTGAACCGCACCTTG
GCTGTACCTCCATGGATTGAATACCAACATCACAAGCCTCCTTTCACCAACCTCCATGTGCTCTACAAA
AGTACTTCAAACCTGGAGCCTCTCCAAGCCTACCATCGGGTTGTCAGCCTGGAGGACTTCATGGAAAATCT
GGCACCTCCCACTGGCCCCCTGAGAAGCGAGTGGCATACTGCTTTGAGGTGGCAGCCCAGCGAAGTCTT
GATAAGAAGACATGTCCCATGAAGGAAGGAAATCCTTTTGGGCCATTCTGGGACCAGTTTCATGTGAGTT
TCAATAAGTCAGAAGTGTTCACAGGCATTTCTTCAGCGCCTCCTACAAAGAACAATGGACCCAGAGATT
TCCTGCAAAAGAGCATCCTGTGCTCGCACTGCCTGGGGCCCCAGCACAGTTCCCTGTCTGGAGGAACAC
AGGGAGCTCCAGAAGTACATGGTGTGGTTCAGATGAGATGGTGAGGACGGGAGAGGCCCTGATCAGTGCC
ACCTCGTCCGGCCCTATGTGGGCATTCTGCGCATTGGCTCCGACTGGAAGAATGCCTGTGCCATGCT
GAAGGATGGAACCTGCAGGGTACACTTTCATGGCTTCCCTCAGTGTGTGGGCTATAGCCGCAGCACAGCG
ACCCCTCACCATGACCATGTGCCTCCTGACCTGAAGGAAATCCAGCGGGCTGTGACGCTTTGGGTGA
GAGCACTGAATGCCAGATCGGTCTACATCGCCACAGACTCTGAGAGCTAGGTGTCAGAGATCCAGCAGCT
CTTCAAAGACAAGGTGAGGGTGGTGTGAGCCTGAAACCCGAGGTGGCCAGATCGACCTGTACATCCTCGGC
CAGGCTGACCACTTATTGGAACTGTGTCTCCTCGTTCACTGCCTTCGTGAAGCGGGAGCGGGACCTCC
ATGGGAGGCAGTCGTCCTTCTTTGGCATGGACAGACCCTCCAGCTTCGGGATGAATTT

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >MR206140 protein sequence
Red=Cloning site Green=Tags(s)

MGAAAWAPPHLLLRSFLLLLLLLLPLRGRSAGSWDLAGYLLYCPCMGRFGNQADHFLGSLAFKLLNRTL
 AVPPWIEYQHHKPPFTNLHVSYQKYFKLEPLQAYHRVVSLEDFMENLAPSHWPPEKRVAFCFEVAAQRSP
 DKKTCMPKEGNPFGPFWDQFHVSFNKSELTGIFSASYSYKEQWTRFPAKEHPVLALPGAPAQFPVLEEH
 RELQKYMVWSDVMVRTGEALISAHLVRPYVGIHLRIGSDWKNACAMLDKGTAGSHFMASPCQVGYRSTA
 TPLTMTMCLPDLKEIQRAVTLWVRALNARSVYIATDSESYVSEIQQLFKDKVRVSLKPEVAQIDLYILG
 QADHFIGNCVSSFTAFVKRERDLHGRQSSFFGMDRPSQLRDEF

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_080463

ORF Size: 1182 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_080463.3](#), [NP_536711.3](#)

RefSeq Size: 5618 bp

RefSeq ORF: 1182 bp

Locus ID: 140484

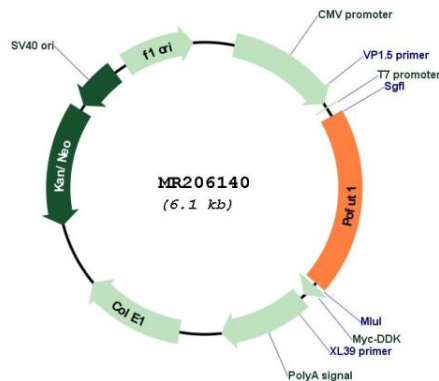
UniProt ID: [Q91ZW2](#)

Cytogenetics: 2 H1

MW: 44.7 kDa

Gene Summary: Catalyzes the reaction that attaches fucose through an O-glycosidic linkage to a conserved serine or threonine residue found in the consensus sequence C2-X(4,5)-[S/T]-C3 of EGF domains, where C2 and C3 are the second and third conserved cysteines. Specifically uses GDP-fucose as donor substrate and proper disulfide pairing of the substrate EGF domains is required for fucose transfer. Plays a crucial role in NOTCH signaling. Initial fucosylation of NOTCH by POFUT1 generates a substrate for FRINGE/RFNG, an acetylglucosaminyltransferase that can then extend the fucosylation on the NOTCH EGF repeats. This extended fucosylation is required for optimal ligand binding and canonical NOTCH signaling induced by DLL1 or JAGGED1. Fucosylates AGRN and determines its ability to cluster acetylcholine receptors (AChRs).[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MR206140