

Product datasheet for **MG225501**

Fzd3 (NM_021458) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Fzd3 (NM_021458) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Fzd3
Synonyms:	AU020229; D930050A07Rik; Fz3
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



[View online »](#)

ORF Nucleotide
Sequence:

>MG225501 representing NM_021458
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCCGCATCGCC

ATGGCTGTGAGCTGGATTGTCTTTGATCTTTGGCTCTTGACTGTGTTTCTGGGGCAGATAGTGGGCACA
GTTTGTCTTTCTTGGAACCTATAACCTTGAGGATGTGCCAAGATTGCCTTACAATACTACCTTCATGCC
TAATCTTCTGAACCATTATGACCAACAGACTGCAGCTTTAGCAATGGAGCCCTTCCACCCTATGGTGAAC
CTGGATTGTTCTCGGATTTTCGGCCATTTCTTTGTGCACTCTATGCCCTATTTGTATGGAATATGGAC
GTGTCACACTTCCTGCCGTAGGCTGTGTGAGCGTGCCTATAGCGAGTGTCAAACCTCATGGAGATGTT
TGGTGTCCCGTGGCTGAAGATATGGAGTGCAGTAGGTTCCAGATTGTGATGAGCCATATCCCGACTT
GTGGATTTGAATTTAGTTGGAGATCCAACCTGAAGGAGCCCAAGTGCAGTGCAGAGGGACTATGGTTTTT
GGTGTCCAGAGAGTTAAAAATGATCCTGATCTTGGCTATTCCTTTCTGCACGTGCGAGATTGTCGCC
ACCATGTCCCAATATGTACTTCAGGAGAGAAGAACTGTCAATTTGCTCGCTATTTTCATAGGCTGATTTCA
ATCATTTCCTCTCTGCCACATTGTTTACTTTTTAACCTTTCTAATTGACGTGACAAGATTCCGTTACC
CTGAAAGACCTATCATATTTTATGCAGTCTGCTACATGATGGTGTCAATATTTTCTTCATTGGGTTTTT
GCTGGAGGACCGAGTAGCCTGCAATGCATCTAGCCCTGCACAGTATAAGGCTTCTACAGTGACACAAGGA
TCTCACAATAAGGCCTGTACCATGCTCTTTATGGTACTATATTTTTTCACTATGGCTGGCAGTGTATGGT
GGGTAATCTTACCATCATATGGTTTTTAGCAGCTGTGCCAAAGTGGGGCAGTGAAGCTATTGAGAAGAA
AGCATTGCTGTTTATGCCAGTGCCTGGGGCATCCCGGAACTCTAACTATCATCCTTTTAGCGATGAAT
AAAATTGAAGGTGACAATATTAGTGGCGTGTGTTTTGTGGCCTCTACGACGTTGATGCATTAAGATATT
TCGTTCTCGCTCCCCTCTGCCTGTATGGTGTAGTTGGGTTTTCTCCTTTTAGCCGGCATTATATCCCT
AAACAGAGTTCGGATTGAGATCCCATTAGAAAAGGAAAACCAAGATAAGTTAGTGAAGTTCATGATCCGG
ATTGGTGTTCAGCATTCTCTACCTTGTGCCACTCTTGTTGTAATTGGATGTTACTTTTATGAGCAAG
CTTACCAGCGCATCTGGGAGACAACATGGATCCAGGAACGCTGCAGAGAGTATCACATTCATGTCGGTA
CCAGGTTACTCAGATGAGTCGTCCAGACCTGATTCTCTTTCTGATGAAGTATCTCATGGCTCTCATAGTT
GGGATTCCTCTATATTTGGGTTGGAAGCAAAAAGACATGCTTTGAATGGGCCAGTTTTTCCATGGGC
GTAGGAAAAAAGAGATAGTGAATGAGAGCCGGCAGGTGCTCCAGGAACCTGACTTTGCTCAGTCACTCCT
GAGGGACCCAAATACTCCAATTATAAGAAAATCAAGAGGAACTTCCACTCAAGGGACATCCACACATGCT
TCTTCAACTCAGCTGGCCATGGTGGATGACCAAGAAGCAAGCAGGGAGTGTCCACAGCAAAGTGAGCA
GCTACCATGGCAGCCTCCACAGGTACGGGATGGCAGGTACACTCCCTGCAGTTACCGAGGAATGGAGGA
GAGACTACCTCACGGCAGCATGTACGGCTGACGGATCATTCCAGGCACAGTAGTTCTCATCGGCTCAAC
GAGCAGTCCCACACAGCAGCATCCGAGACCTCAGTAACAACCCCATGACTCACATTACACATGGCACCA
GCATGAACCGTGTATTGAGGAGGATGGAACCAAGTGT

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >MG225501 representing NM_021458
 Red=Cloning site Green=Tags(s)

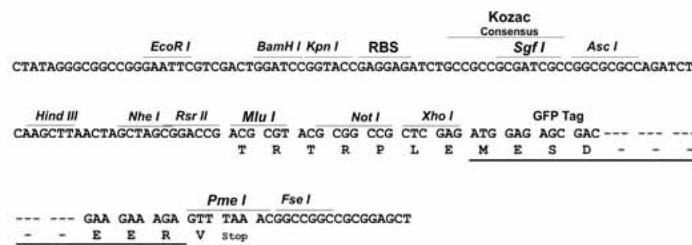
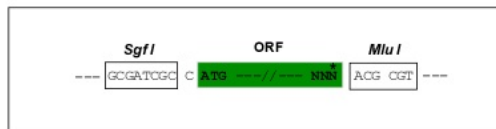
MAVSWIVFDLWLLTVFLGQIGGHSLFSCPEITLRMCQDLPYNTTFMPNLLNHYDQQTAALAMEPFHPMVN
 LDCSRDFRPFALCALYAPICMEYGRVTLPCRRLCQRAYSECSKLMEMFGVPWPEDMECSRFPDCDEPYPRL
 VDLNLVGDPTGAPVAVQRDYGFWCPRELKIDPDLGYSFLHVRDCSPPCPNMYFRREELSFARYF IGLIS
 IICLSATLFTFLTFLIDVTRFRYPERPIIFYAVCYMMVSLIFFIGFLLEDRVACNASSPAQYKASTVTQG
 SHNKACTMLFMVLYFFTMAGSVVWVILTIWFLAAVPKWGSEAIEKKALLFHASAWGIPGTLTIILLAMN
 KIEGDNISGVCFVGLYDVALRYFVLAFLCLYVVVGVSLLLAGIISLNRVRIEIPLEKENQDKLVKFMIR
 IGVFSILYLVPLLVVIGCYFYEQAYRGIWETTWIQERCREYHPCPYQVTQMSRPDLILFLMKYLMALIV
 GIPSIFWVGSKTCFEWASFFHGRKKEIVNESRQVLQEPDFAQSLLRDPNTPIIRKSRGTSTQGTSTHA
 SSTQLAMVDDQRSKAGSVHSKSVSSYHGLHRSRDGRYTPCSYRGMEEERLPHGMSRLTDHSRHSSSHRLN
 EQSRHSSIRDLSNNPMTHITHGTSMNRVIEEDG TSA

TRTRPLE - GFP Tag - V

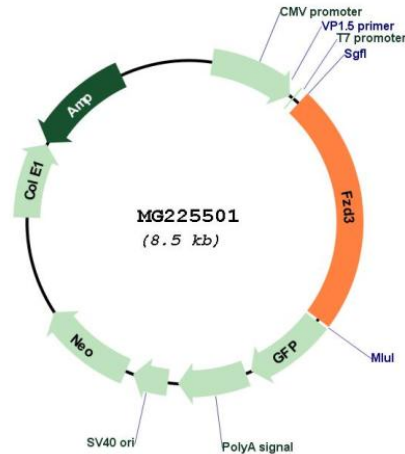
Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



Plasmid Map:



ACCN: NM_021458

ORF Size: 1998 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_021458.2](#), [NP_067433.1](#)

RefSeq Size: 12742 bp

RefSeq ORF: 2001 bp

Locus ID: 14365

UniProt ID: [Q61086](#)

Cytogenetics: 14 34.09 cM

Gene Summary: Receptor for Wnt proteins. Most of frizzled receptors are coupled to the beta-catenin canonical signaling pathway, which leads to the activation of disheveled proteins, inhibition of GSK-3 kinase, nuclear accumulation of beta-catenin and activation of Wnt target genes. A second signaling pathway involving PKC and calcium fluxes has been seen for some family members, but it is not yet clear if it represents a distinct pathway or if it can be integrated in the canonical pathway, as PKC seems to be required for Wnt-mediated inactivation of GSK-3 kinase. Both pathways seem to involve interactions with G-proteins. Activation by Wnt5A stimulates PKC activity via a G-protein-dependent mechanism. Involved in transduction and intercellular transmission of polarity information during tissue morphogenesis and/or in differentiated tissues. Plays a role in controlling early axon growth and guidance processes necessary for the formation of a subset of central and peripheral major fiber tracts. Required for the development of major fiber tracts in the central nervous system, including: the anterior commissure, the corpus callosum, the thalamocortical, corticothalamic and nigrostriatal tracts, the corticospinal tract, the fasciculus retroflexus, the mammillothalamic tract, the medial lemniscus, and ascending fiber tracts from the spinal cord to the brain. In the peripheral nervous system, controls axon growth in distinct populations of cranial and spinal motor neurons, including the facial branchiomotor nerve, the hypoglossal nerve, the phrenic nerve, and motor nerves innervating dorsal limbs. Involved in the migration of cranial neural crest cells. May also be implicated in the transmission of sensory information from the trunk and limbs to the brain. Controls commissural sensory axons guidance after midline crossing along the anterior-posterior axis in the developing spinal cord in a Wnt-dependent signaling pathway. Together with FZD6, is involved in the neural tube closure and plays a role in the regulation of the establishment of planar cell polarity (PCP), particularly in the orientation of asymmetric bundles of stereocilia on the apical faces of a subset of auditory and vestibular sensory cells located in the inner ear. Promotes neurogenesis by maintaining sympathetic neuroblasts within the cell cycle in a beta-catenin-dependent manner. [UniProtKB/Swiss-Prot Function]