

Product datasheet for **MG226791**

Tgfbr2 (NM_029575) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Tgfbr2 (NM_029575) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Tgfbr2
Synonyms:	1110020H15Rik; AU042018; DNIIR; RIIDN; TbetaR-II; TbetaRII; TBR-II
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>MG226791 representing NM_029575
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGGGTCGGGGCTGCTCCGGGCTGTGGCCGCTGCATATCGTCTGTGGACGCGCATCGCCAGCACGA
 TCCCGCCGACGTTCCCAAGTCGGTTAACAGTGATGTCATGGCCAGCGACAATGGCGGTGCGGTCAAGCT
 TCCACAGCTGTGCAAGTTTTGCGATGTGAGACTGTCCACTTGCACAACCAAGATCCTGCATGAGCAAC
 TGCAGCATCACGGCCATCTGTGAGAAGCCGCATGAAGTCTGCGTGGCCGTGTGGAGGAAGAACGACAAGA
 ACATTACTCTGGAGACGGTTTCCACGACCCCAAGCTCACCTACCACGGCTTCACTCTGGAAGATGCCGC
 TTCTCCCAAGTGTGCATGAAGGAAAAGAAAAGGGCGGGCAGACTTTCTTCATGTGTGCCTGTAACATG
 GAAGAGTGCAACGATTACATCATCTTTTCGGAAGAATACACCACCAGCAGTCCCGACCTGTTGTTGGTCA
 TTATCCAAGTGACGGGTGTCAGCCTCCTGCCTCCGCTGGGGATTGCCATAGCTGCATCATCATCTTCTA
 CTGCTACCGTGTCCACCGCAGCAGAAGCTGAGCCCGTCTGGGAGAGCAGCAAGCCCCGAAAAGTATG
 GATTTTCAGTGACAATTGTGCCATCATCCTGGAGGACGACCGCTCCGACATCAGCTCCACGTGCGCCAACA
 ACATCAACCACAACACGGAGCTGCTGCCATCGAGCTGGACACGCTGGTGGGGAAGGGCCGCTTCGCCGA
 GGTCTACAAGGCCAAGCTGAAGCAGAACACCTCAGAGCAGTTTGGAGCCGTGGCTGTCAAGATCTTCCCC
 TACGAGGAGTACTCCTCGTGAAAACAGAGAAGGACATCTTCTCCGATATCAACCTGAAGCATGAGAACA
 TCCTGCAGTTCCTGACGGCCGAGGAGCGGAAGACAGAGCTGGGCAAGCAGTACTGGCTGATCACGGCGTT
 CCACGCGAAGGGCAACCTGCAGGAGTACCTCACGAGGCATGTATCAGCTGGGAGACCTGAGGAAGCTG
 GGCAGCTCCCTGGCCCGGGCATCGCTCATCTCCACAGTGACCACACTCCTTGTGGGAGGCCCAAGATGC
 CCATTGTTACAGGGACCTCAAGAGCTTAACATCCTAGTGAAGAAGCAGTACTGACCTGTTGCTGTGGA
 CTTGCGGGCTGTCCTTGGCCTGGACCCTACTCTGTCTGTGGATGACCTGGCCAACAGCGGGCAGGTGGGA
 ACGGCAAGATACATGGCCCCGGAAGTTCTAGAATCCAGGATGAATCTGGAACAGTGGAGTCTTCAAGC
 AGACGGATGTCTACTCCATGGCTCTGGTACTCTGGGAAATGACGTCCTGCAATGCTGTGGGAGAAGT
 GAAGGATTACGAGCCCCATTTGGTTCCAAGGTGCGGGAGACCCCTGTGTGGAGAGCATGAAAGACAGT
 GTGCTGAGAGACCGAGGGCGCCGAAATTCAGCTTCTGGCTCAACCACCAGGCATCCAGATCGTGT
 GTGAGACTTTGACCGAGTCTGGGACATGACCCGAAGCCGCTCTCACAGCACAGTGTGTGGCAGAGCG
 CTTTCAGTGAGCTGGAGCATCCGGAGAGACTCTCTGGGAGGAGCTGCTCCAGGAGAAGATTCCAGAAGT
 GGCTCGCTGAACACTACAAA

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

Protein Sequence:

>MG226791 representing NM_029575
 Red=Cloning site Green=Tags(s)

MGRGLLRGLWPLHIVLWTRIASTIPPHVPKSVNSDVMASDNGGAVKLPQLCKFCDVRLSTCDNQKSCMSN
 CSITAICEKPHEVCVAVWRKNDKNITLETVCHDPKLYHGFTLEDAASPKCVMKEKKRAGETFFMCACNM
 EECNDYIIFSEYTTSSPDLLLVIQVTGVSLPLPLGIAIAVIIIFYCYRVHRQKLSWESSKPRKLM
 DFDNCAIILEDSDISSTCANNINHNTELLPIELDTLVGKGRFAEVYKAKLKQNTSEFETVAVKIFP
 YEEYSSWKTEKDIFSDINLKHENILQFLTAEERKTELKQYWLITAFHAKGNLQEYLTRHVISWEDLRKL
 GSSLARGIAHLSDHTPCGRPKMPIVHRDLKSSNILVKNDLTCCLCDFGLSLRLDPTLSVDDLANSQVVG
 TARYMAPEVLESRMNLENVESFKQTDVYSMALVLWEMTSRCNAVGEVKDYEPFPGSKVREHPCVESMKDS
 VLRDRGRPEIPSWLNLHQGIQIVCETLTCWDHDPPEARLTAQCVARERSELEHPERLSGRSCSSEKIPED
 GSLNTTK

TRTRPLE – GFP Tag – V

Chromatograms:

https://cdn.origene.com/chromatograms/ja1381_h07.zip

Restriction Sites:

SgfI-MluI

Cloning Scheme:


ACCN: NM_029575

ORF Size: 1701 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_029575.3](#), [NP_083851.3](#)

RefSeq Size: 4728 bp

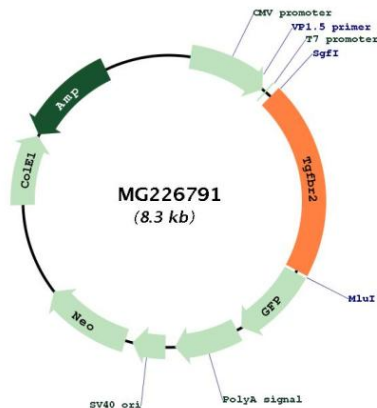
RefSeq ORF: 1704 bp

Locus ID: 21813

Cytogenetics: 9 68.39 cM

Gene Summary:

Transmembrane serine/threonine kinase forming with the TGF-beta type I serine/threonine kinase receptor, TGFBR1, the non-promiscuous receptor for the TGF-beta cytokines TGFB1, TGFB2 and TGFB3. Transduces the TGFB1, TGFB2 and TGFB3 signal from the cell surface to the cytoplasm and is thus regulating a plethora of physiological and pathological processes including cell cycle arrest in epithelial and hematopoietic cells, control of mesenchymal cell proliferation and differentiation, wound healing, extracellular matrix production, immunosuppression and carcinogenesis. The formation of the receptor complex composed of 2 TGFBR1 and 2 TGFBR2 molecules symmetrically bound to the cytokine dimer results in the phosphorylation and the activation of TGFBR1 by the constitutively active TGFBR2. Activated TGFBR1 phosphorylates SMAD2 which dissociates from the receptor and interacts with SMAD4. The SMAD2-SMAD4 complex is subsequently translocated to the nucleus where it modulates the transcription of the TGF-beta-regulated genes. This constitutes the canonical SMAD-dependent TGF-beta signaling cascade. Also involved in non-canonical, SMAD-independent TGF-beta signaling pathways (By similarity).[UniProtKB/Swiss-Prot Function]

Product images:

Circular map for MG226791