

Product datasheet for **RG210227**

Activin Receptor Type IIA (ACVR2A) (NM_001616) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Activin Receptor Type IIA (ACVR2A) (NM_001616) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Activin Receptor Type IIA
Synonyms:	ACTRII; ACVR2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG210227 representing NM_001616
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGGGAGCTGCTGCAAAGTTGGCGTTTGGCGTCTTTCTTATCTCCTGTTCTTCAGGTGCTATACTTGGTA
 GATCAGAAACTCAGGAGTGCTTTTCTTTAATGCTAATTGGGAAAAAGACAGAACCAATCAAACCTGGTGT
 TGAACCGTGTTATGGTGACAAAGATAAACGCGCGCATTGTTTTGCTACCTGGAAGAAATTTTCTGGTTCC
 ATTGAAATAGTGAACAAGGTTGTTGGCTGGATGATATCAACTGCTATGACAGGACTGATTGTGTAGAAA
 AAAAAGACAGCCCTGAAGTATATTTTTGTTGCTGTGAGGGCAATATGTGTAATGAAAAGTTTTCTATTT
 TCCAGAGATGGAAGTACACAGCCCACTCAAATCCAGTTACACCTAAGCCACCCATTACAACATCCTG
 CTCTATTCCTTGGTGCCACTTATGTTAATTGCGGGGATTGTCATTTGTGCATTTTGGGTGTACAGGCATC
 ACAAGATGGCCTACCCTCTGTACTTGTCCAACCTCAAGACCCAGGACCACCCCACTTCTCCATTACT
 AGGTTTGAACCACTGCAGTTATTAGAAGTGAAGCAAGGGGAAGATTTGTTGTGTCTGGAAGCCAG
 TTGCTTAACGAATATGTGGCTGTCAAAATATTTCCAATACAGGACAAACAGTCATGGCAAAATGAATACG
 AAGTCTACAGTTTGCCTGGAATGAAGCATGAGAACATATTACAGTTCATTGGTGCAGAAAAACGAGGCAC
 CAGTGTGATGTGGATCTTTGGCTGATCACAGCATTTCATGAAAAGGGTTCACTATCAGACTTTCTTAAG
 GCTAATGTGGTCTCTTGGAAATGAACTGTGTCAATTGCAGAAACCATGGCTAGAGGATTGGCATATTTAC
 ATGAGGATATACCTGGCCTAAAAGATGGCCACAAACCTGCCATATCTCACAGGGACATCAAAAGTAAAA
 TGTGCTGTTGAAAACAACCTGACAGCTGCATTGCTGACTTTGGGTTGGCCTTAAAATTTGAGGCTGGC
 AAGTCTGCAGGCGATACCCATGGACAGGTTGGTACCCGGAGGTACATGGCTCCAGAGGTATTAGAGGGTG
 CTATAAAGTTCCAAAGGGATGCATTTTTGAGGATAGATATGTATGCCATGGGATTAGTCTTATGGAACT
 GGCTTCTCGCTGACTGCTGCAGATGGACCTGTAGATGAATACATGTTGCCATTTGAGGAGGAAATTTGGC
 CAGCATCCATCTCTTGAAGACATGCAGGAAGTTGTTGTGCATAAAAAAAGAGGCCTGTTTTAAGAGATT
 ATTGGCAGAAACATGCTGGAATGGCAATGCTCTGTGAAACCATTGAAGAATGTTGGGATCACGACGAGA
 AGCCAGGTTATCAGCTGGATGTGTAGGTGAAAGAATTACCCAGATGCAGAGACTAACAAATATTATTACC
 ACAGAGGACATTGTAACAGTGGTCAATGGTGACAAATGTTGACTTTCCTCCAAAGAATCTAGTCTA

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>RG210227 representing NM_001616
 Red=Cloning site Green=Tags(s)

MGAAAKLAFVFLISCSGAILGRSETQECLFFNANWEKDRNTQTVPEPCYGDKDKRRHCFATWKNISGS
 IEIVKQGCWLDDINCYDRDTCVEKKDSPEVYFCCEGNMCNEKFSYFPEMEVTQPTSNPVTPKPPYYNIL
 LYSLVPLMLIAGIVICAFWVYRHHKMAYPVLPVPTQDPGPPPPSPLLGLKPLQLLEVKARGRFVWKAQ
 LLNEYVAVKIFPIQDKQSWQNEYEVYSLPGMKHENILQFIGAEKRGTSVDVLDLWITAFHEKGSLSDFLK
 ANVYSWNEIACHIAETMARGLAYLHEDIPLKDGHKPAISHRDIKSKNVLLKNNLTACIADFGALALKEAG
 KSAGDTHGQVTRRYMAPEVLEGAINFQRDAFLRIDMYAMGLVLWELASRCTAADGPVDEYMLPFEEEEIG
 QHPSLEDMQEVVHKKRPVLRDYWQKHAGMAMLCETIEECWDHDAEARLSAGCVGERITQMQRLTNIIT
 TEDIVTVVMTNVDFFPKESL

TRTRPLE - GFP Tag - V

Restriction Sites:

Sgfl-Mlul

Cloning Scheme:


ACCN: NM_001616

ORF Size: 1539 bp

OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.

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_001616.3](#), [NP_001607.1](#)

RefSeq Size: 5244 bp

RefSeq ORF: 1542 bp

Locus ID: 92

UniProt ID: [P27037](#)

Cytogenetics: 2q22.3-q23.1

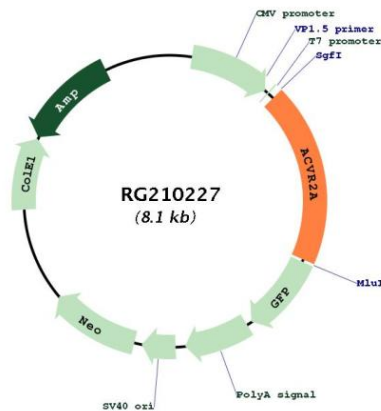
Domains: Activin_recp, pkinase, TyrKc, S_TKc

Protein Families: Druggable Genome, Protein Kinase, Transmembrane

Protein Pathways: Cytokine-cytokine receptor interaction, TGF-beta signaling pathway

Gene Summary: This gene encodes a receptor that mediates the functions of activins, which are members of the transforming growth factor-beta (TGF-beta) superfamily involved in diverse biological processes. The encoded protein is a transmembrane serine-threonine kinase receptor which mediates signaling by forming heterodimeric complexes with various combinations of type I and type II receptors and ligands in a cell-specific manner. The encoded type II receptor is primarily involved in ligand-binding and includes an extracellular ligand-binding domain, a transmembrane domain and a cytoplasmic serine-threonine kinase domain. This gene may be associated with susceptibility to preeclampsia, a pregnancy-related disease which can result in maternal and fetal morbidity and mortality. Alternative splicing results in multiple transcript variants of this gene. [provided by RefSeq, Jun 2013]

Product images:



Circular map for RG210227