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Product datasheet for RC212816

Activin Receptor Type IIB (ACVR2B) (NM_001106) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Activin Receptor Type IIB (ACVR2B) (NM_001106) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Activin Receptor Type IIB
Synonyms:	ActR-IIB; ACTRIIB; HTX4
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

View online »

ORF Nucleotide Sequence:

>RC212816 representing NM_001106
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGACGGCGCCCTGGGTGGCCCTCGCCCTCCTCTGGGGATCGCTGTGCGCCGGCTCTGGGCGTGGGGAGG
CTGAGACACGGGAGTGCATCTACTACAACGCCAACTGGGAGCTGGAGCGCACCAACCAGAGCGGCCTGGA
GCGCTGCGAAGGCGAGCAGGACAAGCGGCTGCACTGCTACGCCTCCTGGCGCAACAGCTCTGGCACCATC
GAGCTCGTGAAGAAGGGCTGCTGGCTAGATGACTTCAACTGCTACGATAGGCAGGAGTGTGTGGCCACTG
AGGAGAACCCCCAGGTGTACTTCTGCTGCTGTGAAGGCAACTTCTGCAACGAACGCTTCACTCATTTGCC
AGAGGCTGGGGGCCCGGAAGTCACGTACGAGCCACCCCCGACAGCCCCCACCCTGCTCACGGTGCTGGCC
TACTCACTGCTGCCCATCGGGGGCCTTTCCCTCATCGTCCTGCTGGCCTTTTGGATGTACCGGCATCGCA
AGCCCCCCTACGGTCATGTGGACATCCATGAGGACCCTGGGCCTCCACCACCATCCCCTCTGGTGGGCCT
GAAGCCACTGCAGCTGCTGGAGATCAAGGCTCGGGGGCGCTTTGGCTGTGTCTGGAAGGCCCAGCTCATG
AATGACTTTGTAGCTGTCAAGATCTTCCCACTCCAGGACAAGCAGTCGTGGCAGAGTGAACGGGAGATCT
TCAGCACACCTGGCATGAAGCACGAGAACCTGCTACAGTTCATTGCTGCCGAGAAGCGAGGCTCCAACCT
CGAAGTAGAGCTGTGGCTCATCACGGCCTTCCATGACAAGGGCTCCCTCACGGATTACCTCAAGGGGAAC
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ATTGCTGAAGAGCGACCTCACAGCCGTGCTGGCTGACTTTGGCTTGGCTGTTCGATTTGAGCCAGGGAAA
CCTCCAGGGGACACCCACGGACAGGTAGGCACGAGACGGTACATGGCTCCTGAGGTGCTCGAGGGAGCCA
TCAACTTCCAGAGAGATGCCTTCCTGCGCATTGACATGTATGCCATGGGGTTGGTGCTGTGGGAGCTTGT
GTCTCGCTGCAAGGCTGCAGACGGACCCGTGGATGAGTACATGCTGCCCTTTGAGGAAGAGATTGGCCAG
CACCCTTCGTTGGAGGAGCTGCAGGAGGTGGTGGTGCACAAGAAGATGAGGCCCACCATTAAAGATCACT
GGTTGAAACACCCGGGCCTGGCCCAGCTTTGTGTGACCATCGAGGAGTGCTGGGACCATGATGCAGAGGC
TCGCTTGTCCGCGGGCTGTGTGGAGGAGCGGGTGTCCCTGATTCGGAGGTCGGTCAACGGCACTACCTCG
GACTGTCTCGTTTCCCTGGTGACCTCTGTCACCAATGTGGACCTGCCCCCTAAAGAGTCAAGCATC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC212816 representing NM_001106
Red=Cloning site Green=Tags(s)

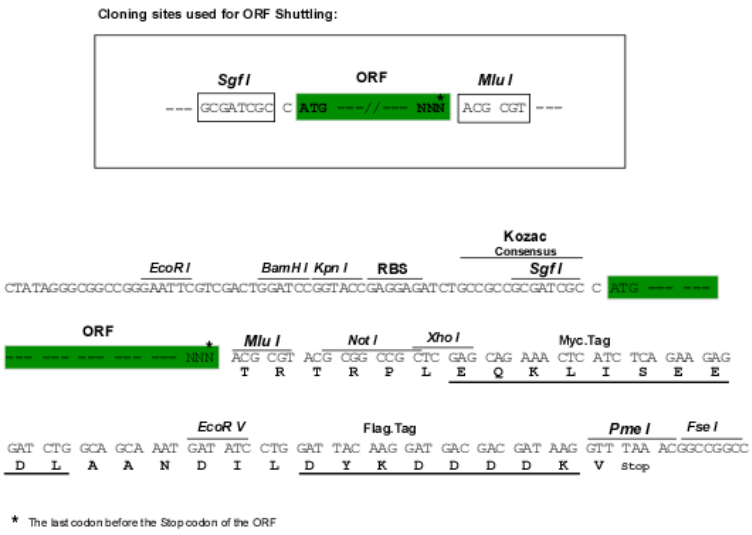
MTAPWVALALLWGSLCAGSGRGEAETRECIYYNANWELERTNQSGLERCEGEQDKRLHCYASWRNSSGTI
ELVKKGCWLDDFNCYDRQECVATEENPQVYFCCCEGNFCNERFTHLPEAGGPEVTYEPPPTAPTLLTVLA
YSLLPIGGLSLIVLLAFWMYRHRKPPYGHVDIHEDPGPPPPSPLVGLKPLQLLEIKARGRFGCVWKAQLM
NDFVAVKIFPLQDKQSWQSEREIFSTPGMKHENLLQFIAAEKRGSNLEVELWLITAFHDKGSLTDYLKGN
IITWNELCHVAETMSRGLSYLHEDVPWCRGEGHKPSIAHRDFKSKNVLLKSDLTAVLADFGLAVRFEPGK
PPGDTHGQVGTRRYMAPEVLEGAINFQRDAFLRIDMYAMGLVLWELVSRCKAADGPVDEYMLPFEEEIGQ
HPSLEELQEVVVHKKMRPTIKDHWLKHPGLAQLCVTIEECWDHDAEARLSAGCVEERVSLIRRSVNGTTS
DCLVSLVTSVTNVDLPPKESSI

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6161_b06.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_001106

ORF Size: 1536 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.

Note: Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

RefSeq: NM_001106.4

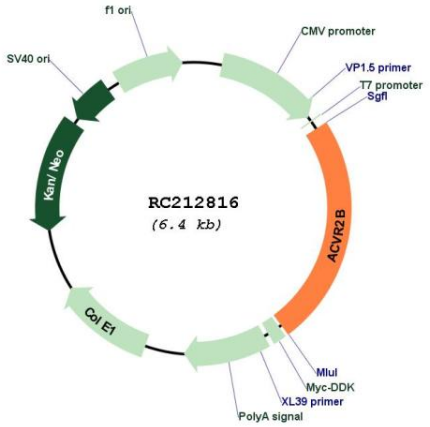
RefSeq Size: 1584 bp

RefSeq ORF: 1539 bp

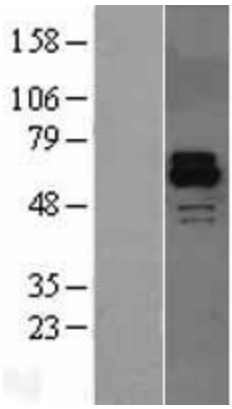
Locus ID: 93

UniProt ID:	Q13705
Cytogenetics:	3p22.2
Domains:	Activin_recp, pkinase, TyrKc, S_TKc
Protein Families:	Druggable Genome, Protein Kinase, Transmembrane
Protein Pathways:	Cytokine-cytokine receptor interaction, TGF-beta signaling pathway
MW:	57.5 kDa
Gene Summary:	Activins are dimeric growth and differentiation factors which belong to the transforming growth factor-beta (TGF-beta) superfamily of structurally related signaling proteins. Activins signal through a heteromeric complex of receptor serine kinases which include at least two type I (I and IB) and two type II (II and IIB) receptors. These receptors are all transmembrane proteins, composed of a ligand-binding extracellular domain with cysteine-rich region, a transmembrane domain, and a cytoplasmic domain with predicted serine/threonine specificity. Type I receptors are essential for signaling; and type II receptors are required for binding ligands and for expression of type I receptors. Type I and II receptors form a stable complex after ligand binding, resulting in phosphorylation of type I receptors by type II receptors. Type II receptors are considered to be constitutively active kinases. This gene encodes activin A type IIB receptor, which displays a 3- to 4-fold higher affinity for the ligand than activin A type II receptor. [provided by RefSeq, Jul 2008]

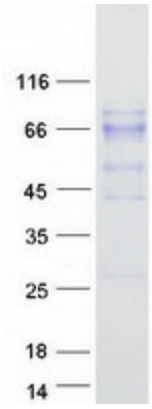
Product images:



Circular map for RC212816



Western blot validation of overexpression lysate (Cat# [LY400448]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC212816 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified ACVR2B protein (Cat# [TP312816]). The protein was produced from HEK293T cells transfected with ACVR2B cDNA clone (Cat# RC212816) using MegaTran 2.0 (Cat# [TT210002]).