

Product datasheet for **RC216681**

ARHGEF9 (NM_015185) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	ARHGEF9 (NM_015185) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	ARHGEF9
Synonyms:	COLLYBISTIN; DEE8; EIEE8; HPEM-2; PEM-2; PEM2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC216681 representing NM_015185
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGACGTTGCTGATCACTGGAGATTCCATCGTTAGTGCTGAGGCAGTATGGGATCACGTCACCATGGCCA
 ACCGGGAGTTGGCATTTAAAGCTGGCGAGTCACTCAAAGTCTTGATGCTTCCAACAAGGATTGGTGGTG
 GGGCCAGATCGACGATGAGGAGGGATGGTTTCTGCCAGCTTTGTGAGGCTCTGGGTGAACCAGGAGGAT
 GAGGTGGAGGAGGGGCCAGCGATGTGCAGAACGGACACCTGGACCCCAATTCAGACTGCCTCTGTCTGG
 GGCGGCCACTACAGAACCGGGACCAGATGCGGGCCAATGTCATCAATGAGATAATGAGCACTGAGCGTCA
 CTACATCAAGCACCTCAAGGATATTTGTGAGGGCTATCTGAAGCAGTGCCGGAAGAGAAGGGACATGTT
 AGTGACGAGCACTGAAGGTAATCTTTGGGAACATTGAAGATATCTACAGATTTAGATGGGCTTTGTGA
 GAGACCTGGAGAAACAGTATAACAATGATGACCCCACTCAGCGAGATAGGACCCTGCTTCTAGAGCA
 CCAAGATGGATTCTGGATATACTCTGAGTATTGTAACAACCACCTGGATGCTTGCATGGAGCTCTCCAAA
 CTGATGAAGGACAGCCGCTACCAGCACTCTTTGAGGCCTGTGCGCTCTTGCAGCAGATGATTGACATTG
 CTATCGATGGTTTCCTTTGACTCTAGTGCAGAAGATCTGCAAGTATCCCTTACAGTTGGCTGAGCTCT
 AAAGTATACTGCCAAGACCACAGTGACTACAGGTATGTGGCAGCTGCTTTGGCTGTGATGAGAAATGTG
 ACTCAGCAGATCAACGAACGCAAGCGACGTTTAGAGAATATTGACAAGATTGCTCAGTGGCAGGCTTCTG
 TCCTAGACTGGGAGGGCGAGGACATCCTAGACAGGAGCTCGGAGCTGATCTACACTGGGGAGATGGCCTG
 GATCTACCAGCCCTACGGCCGCAACCAGCAGCGGGTCTTCTTCTGTTGACCACCAGATGGTCTCTG
 AAGAAGGACCTAATCCGGAGAGACATCCTGTACTACAAAGGCCGATTGACATGGATAAAATGAGGTAG
 TTGACATTGAGGATGGCAGAGATGACTTCAATGTCAGCATGAAGAATGCCTTTAAGCTTCACAACAA
 GGAGACTGAGGAGATACATCTGTTCTTTGCCAAGAAGCTGGAGGAAAAAATACGCTGGCTCAGGGCTTTC
 AGAGAAGAGAGGAAAATGGTACAGGAAGATGAAAAAATTGGCTTTGAAATTTCTGAAAACCAAGAGGC
 AGGCTGCAATGACTGTGAGAAAAGTCCCTAAGCAAAAAGGTGCAACTCTGCCCGCTCAGTTCCTCCTTC
 CTACCCACCACCGCAGGACCCGTTAAACCACGGCCAGTACCTGGTCCCGACGGCATCGCTCAGTCGCGAG
 GTCTTTGAGTTCACCGAACCCAAGCGCAGCCAGTACCATTCTGGCAAACTTCAGCAGGTTAACCCCT
 TCAAAAAA

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC216681 representing NM_015185
 Red=Cloning site Green=Tags(s)

MTLLITGDSIVSAEAVDHTMANRELAFAKAGDVIKVLDASNKDWVWQIDDEEGWFPASFVRLWVNQED
 EVEEGPSDVQNGHLDPNSDCLCLGRPLQNRDQMRANVINEIMSTERHYIKHLKDIICEGYLKQCRKRRDMF
 SDEQLKVIIFGNIEDIYRFQMGFVRDLEKQYNNDDPHLSEIGPCFLEHQDFWIYSEYCNHLDACMELSK
 LMKDSRYQHFFACRLLQQMIDIAIDGFLTLVQKICKYPLQLAELLKYTAQDHSYRYVAAALAVMRNV
 TQQINERKRRLENIDKIAQWQASVLDWEGEDILDRSSEL IYTGEMAWIYQPYGRNQQRVFFLFDHQMVLC
 KKDLIRRDILYYKGRIDMDKYEVDIEDGRDDDFNVSMKNAFKLHNKETEIEHLFFAKKLEEKIRWLRAF
 REERKMVQEDEKIGFEISENQKRAAMTVRKVPKQKGVNSARVPPSYPPPQDPLNHGQYLVPDGIASQ
 VFEFTEPKRSQSPFWQNF SRLTPFKK

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/mk6216_f11.zip

Restriction Sites:

Sgfl-MluI

Cloning Scheme:


ACCN: NM_015185

ORF Size: 1548 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_015185.3](#)

RefSeq Size: 5413 bp

RefSeq ORF: 1551 bp

Locus ID: 23229

UniProt ID: [O43307](#)

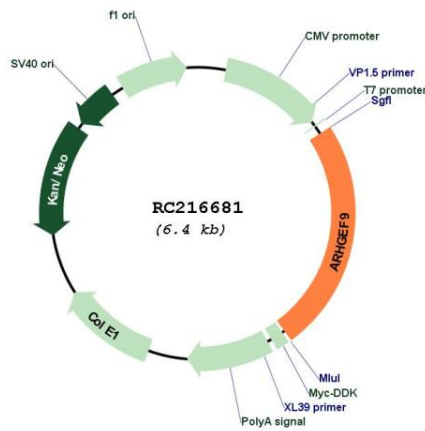
Cytogenetics: Xq11.1

Domains: RhoGEF, SH3, PH

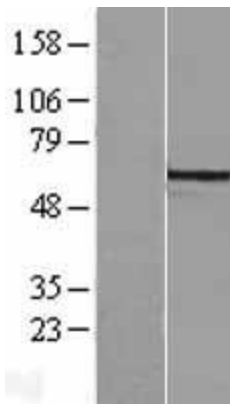
MW: 60.8 kDa

Gene Summary: The protein encoded by this gene is a Rho-like GTPase that switches between the active (GTP-bound) state and inactive (GDP-bound) state to regulate CDC42 and other genes. This brain-specific protein also acts as an adaptor protein for the recruitment of gephyrin and together these proteins facilitate receptor recruitment in GABAergic and glycinergic synapses. Defects in this gene are the cause of startle disease with epilepsy (STHEE), also known as hyperekplexia with epilepsy, as well as several other types of cognitive disability. Multiple transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Jul 2017]

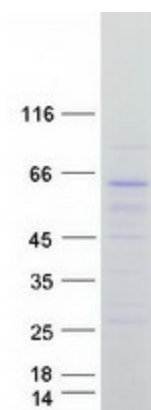
Product images:



Circular map for RC216681



Western blot validation of overexpression lysate (Cat# [LY414739]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC216681 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified ARHGEF9 protein (Cat# [TP316681]). The protein was produced from HEK293T cells transfected with ARHGEF9 cDNA clone (Cat# RC216681) using MegaTran 2.0 (Cat# [TT210002]).