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Product datasheet for RC205473

RASA1 (NM_002890) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	RASA1 (NM_002890) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	RASA1
Synonyms:	CM-AVM; CMAVM; CMAVM1; GAP; p120; p120GAP; p120RASGAP; PKWS; RASA; RASGAP
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

ORF Nucleotide Sequence:

>RC205473 ORF sequence
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
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ATGATGGCGGCCGAGGCCGGCAGTGAGGAGGGCGGCCCGGTAACAGCCGGAGCTGGAGGAGGCGGCGCGG
CAGCGGGCTCCAGTGCCTATCCCGCAGTGTGTCGGGTGAAGATACCCGCGGCCCTGCCTGTGGCAGCCGC
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AGCGGACCGACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC
TGGATTACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC205473 protein sequence
Red=Cloning site Green=Tags(s)

MMAAEAGSEEGGPVTAGAGGGGAAAGSSAYPAVCRVKIPAALPVAAAPYPGLVETGVAGTLGGGAALGSE
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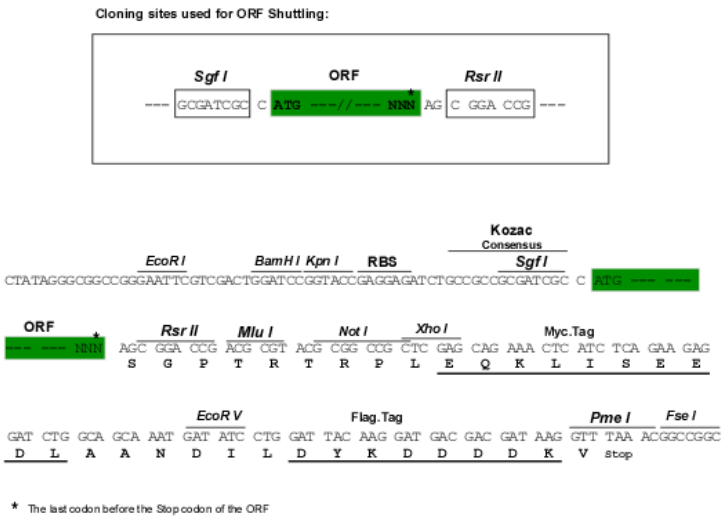
Chromatograms: https://cdn.origene.com/chromatograms/mk6188_e06.zip

Restriction Sites: SgfI-RsrII

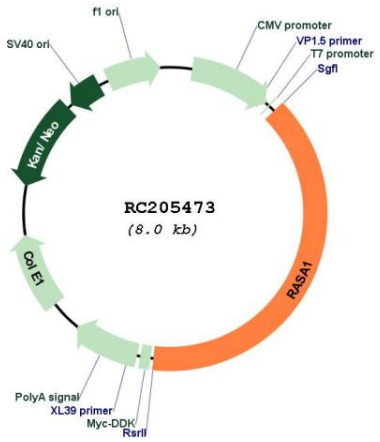
Cloning Scheme:



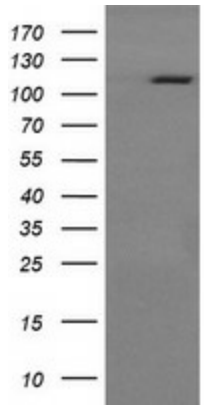
ACCN:	NM_002890
ORF Size:	3141 bp
OTI Disclaimer:	The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own 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_002890.3
RefSeq Size:	4402 bp
RefSeq ORF:	3144 bp

Locus ID:	5921
UniProt ID:	P20936
Cytogenetics:	5q14.3
Domains:	C2, SH2, SH3, PH, RasGAP
Protein Families:	Druggable Genome
Protein Pathways:	Axon guidance, MAPK signaling pathway
MW:	116.4 kDa
Gene Summary:	The protein encoded by this gene is located in the cytoplasm and is part of the GAP1 family of GTPase-activating proteins. The gene product stimulates the GTPase activity of normal RAS p21 but not its oncogenic counterpart. Acting as a suppressor of RAS function, the protein enhances the weak intrinsic GTPase activity of RAS proteins resulting in the inactive GDP-bound form of RAS, thereby allowing control of cellular proliferation and differentiation. Mutations leading to changes in the binding sites of either protein are associated with basal cell carcinomas. Mutations also have been associated with hereditary capillary malformations (CM) with or without arteriovenous malformations (AVM) and Parkes Weber syndrome. Alternative splicing results in two isoforms where the shorter isoform, lacking the N-terminal hydrophobic region but retaining the same activity, appears to be abundantly expressed in placental but not adult tissues. [provided by RefSeq, May 2012]

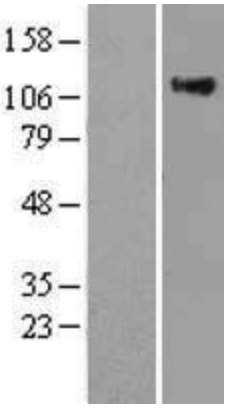
Product images:



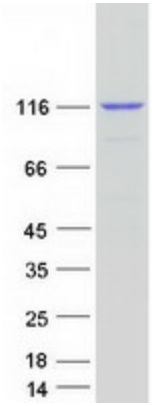
Circular map for RC205473



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY RASA1 (Cat# RC205473, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-RASA1(Cat# [TA505935]). Positive lysates [LY401014] (100ug) and [LC401014] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY401014]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC205473 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified RASA1 protein (Cat# [TP305473]). The protein was produced from HEK293T cells transfected with RASA1 cDNA clone (Cat# RC205473) using MegaTran 2.0 (Cat# [TT210002]).