

Product datasheet for **RC220233**

TIAM1 (NM_003253) Human Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
Product Name: TIAM1 (NM_003253) Human Tagged ORF Clone
Tag: Myc-DDK
Symbol: TIAM1
Synonyms: TIAM-1
Mammalian Cell Selection: Neomycin
Vector: pCMV6-Entry (PS100001)
E. coli Selection: Kanamycin (25 ug/mL)
ORF Nucleotide Sequence: >RC220233 representing NM_003253
Red=Cloning site Blue=ORF Green=Tags(s)

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Protein Sequence: >RC220233 representing NM_003253
 Red=Cloning site Green=Tags(s)

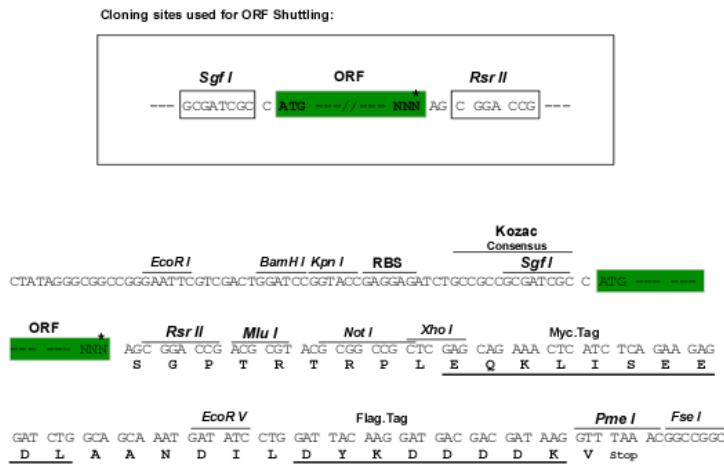
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SGP TRRRLEQKLI SEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk8019_g03.zip

Restriction Sites: Sgfl-RsrII

Cloning Scheme:



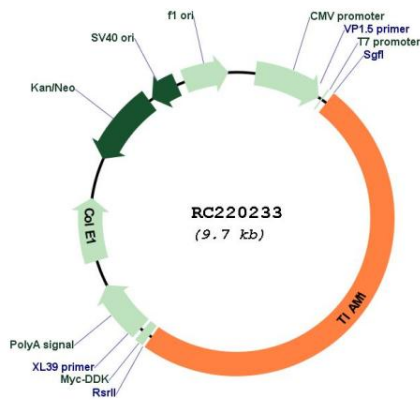
* The last codon before the Stop codon of the ORF

ACCN: NM_003253

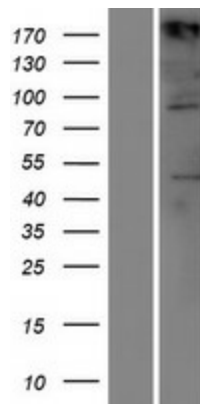
ORF Size:	4773 bp
OTI Disclaimer:	The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. 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:	<ol style="list-style-type: none">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_003253.3
RefSeq Size:	5521 bp
RefSeq ORF:	4776 bp
Locus ID:	7074
UniProt ID:	Q13009
Cytogenetics:	21q22.11
Domains:	RhoGEF, PDZ, PH, RBD
Protein Families:	Druggable Genome
Protein Pathways:	Chemokine signaling pathway, Regulation of actin cytoskeleton
MW:	177.3 kDa

Gene Summary:

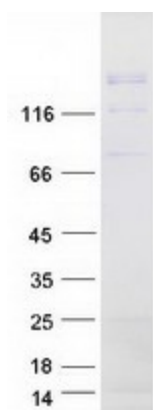
This gene encodes a RAC1-specific guanine nucleotide exchange factor (GEF). GEFs mediate the exchange of guanosine diphosphate (GDP) for guanosine triphosphate (GTP). The binding of GTP induces a conformational change in RAC1 that allows downstream effectors to bind and transduce a signal. This gene thus regulates RAC1 signaling pathways that affect cell shape, migration, adhesion, growth, survival, and polarity, as well as influencing actin cytoskeletal formation, endocytosis, and membrane trafficking. This gene thus plays an important role in cell invasion, metastasis, and carcinogenesis. In addition to RAC1, the encoded protein activates additional Rho-like GTPases such as CDC42, RAC2, RAC3 and RHOA. This gene encodes multiple protein isoforms that experience a diverse array of intramolecular, protein-protein, and phosphorylation interactions as well as phosphoinositide binding. Both the longer and shorter isoforms have C-terminal Dbl homology (DH) and pleckstrin homology (PH) domains while only the longer isoforms of this gene have the N-terminal myristoylation site and the downstream N-terminal PH domain, ras-binding domain (RBD), and PSD-95/DlgA/ZO-1 (PDZ) domain. [provided by RefSeq, Jul 2017]

Product images:


Circular map for RC220233



Western blot validation of overexpression lysate (Cat# [LY418807]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC220233 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified TIAM1 protein (Cat# [TP320233]). The protein was produced from HEK293T cells transfected with TIAM1 cDNA clone (Cat# RC220233) using MegaTran 2.0 (Cat# [TT210002]).