

Product datasheet for **RC208738**

RAN (NM_006325) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	RAN (NM_006325) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	RAN
Synonyms:	ARA24; Gsp1; TC4
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC208738 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTGCGACTGGATCCGGTACCGAGGAGATCTGCCGCC**CGATCGCC**

ATGGCTGCGCAGGGAGAGCCCCAGGTCCAGTTCAACTTGTATTGGTTGGTGATGGTGGTACTGGAAAA
CGACCTTCGTGAAACGTCATTTGACTGGTGAATTTGAGAAGAAGTATGTAGCCACCTTGGGTGTTGAGGT
TCATCCCTAGTGTCCACCAACAGAGGACCTATTAAGTTCATGTATGGGACACAGCCGCCAGGAG
AAATTCGGTGGACTGAGAGATGGCTATTATATCCAAGCCCAGTGTCCATCATAATGTTTGATGTAACAT
CGAGAGTACTTACAAGAATGTGCCTAACTGGCATAGAGATCTGGTACGAGTGTGTGAAACATCCCCAT
TGTGTTGTGTGGCAACAAGTGGATATTAAGGACAGGAAAGTGAAGGCGAAATCCATTGTCTCCACCGA
AAGAAGAATCTTCAGTACTACGACATTTCTGCCAAAAGTAACTACAACCTTGAAAAGCCCTTCTCTGGC
TTGCTAGGAAGCTCATTGGAGACCCTAAGTTGGAATTTGTTGCCATGCCTGCTCTCGCCCCACCAGAAGT
TGTGATGGACCCAGCTTTGGCAGCACAGTATGAGCAGCACTTAGAGGTTGCTCAGACAACCTGCTCTCCC
GATGAGGATGATGACCTG

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >RC208738 protein sequence
Red=Cloning site Green=Tags(s)

MAAQGEPQVQFKLVLVGDGGTGKTTFVKRHLTGEFEKKYVATLGVEVHPLVFHTNRGPIKFNVWDTAGQE
 KFGGLRDGYIQAQCAIIMFDVTSRVTYKNVPNWHRDLVRVCENIPVLCGNKVDIKDRKYKAKSIVFHR
 KKNLQYYDISAKSNYNFEKPFLLWLRKILIGDPNLEFVAMPALAPPEVVMPALAAQYEHDLVAQTALP
 DEDDDL

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6091_b05.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

ACCN: NM_006325

ORF Size: 648 bp

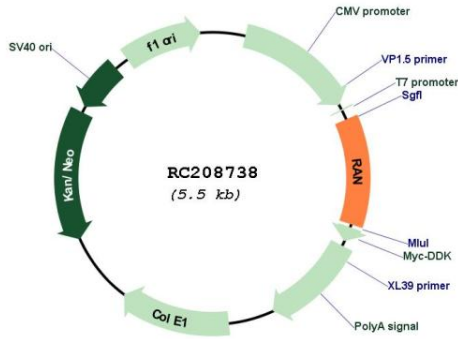
OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially 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.

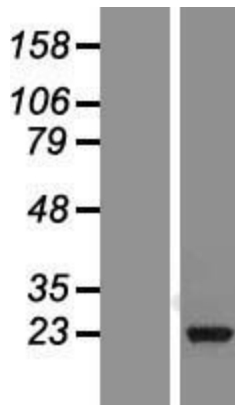
Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

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_006325.5
RefSeq Size:	2546 bp
RefSeq ORF:	651 bp
Locus ID:	5901
UniProt ID:	P62826
Cytogenetics:	12q24.33
Domains:	ras, RAN, RAS, RHO, RAB
Protein Families:	Druggable Genome, Transcription Factors
MW:	24.4 kDa
Gene Summary:	<p>RAN (ras-related nuclear protein) is a small GTP binding protein belonging to the RAS superfamily that is essential for the translocation of RNA and proteins through the nuclear pore complex. The RAN protein is also involved in control of DNA synthesis and cell cycle progression. Nuclear localization of RAN requires the presence of regulator of chromosome condensation 1 (RCC1). Mutations in RAN disrupt DNA synthesis. Because of its many functions, it is likely that RAN interacts with several other proteins. RAN regulates formation and organization of the microtubule network independently of its role in the nucleus-cytosol exchange of macromolecules. RAN could be a key signaling molecule regulating microtubule polymerization during mitosis. RCC1 generates a high local concentration of RAN-GTP around chromatin which, in turn, induces the local nucleation of microtubules. RAN is an androgen receptor (AR) coactivator that binds differentially with different lengths of polyglutamine within the androgen receptor. Polyglutamine repeat expansion in the AR is linked to Kennedy's disease (X-linked spinal and bulbar muscular atrophy). RAN coactivation of the AR diminishes with polyglutamine expansion within the AR, and this weak coactivation may lead to partial androgen insensitivity during the development of Kennedy's disease. [provided by RefSeq, Jul 2008]</p>

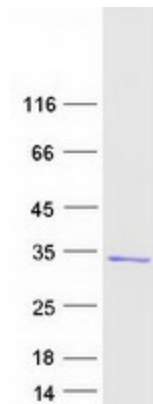
Product images:



Circular map for RC208738



Western blot validation of overexpression lysate (Cat# [LY416718]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC208738 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified RAN protein (Cat# [TP308738]). The protein was produced from HEK293T cells transfected with RAN cDNA clone (Cat# RC208738) using MegaTran 2.0 (Cat# [TT210002]).