

RAN cDNA

Catalog Number: ATGD0018

PRODUCT INFORMATION

Catalog number

ATGD0018

Product type

cDNA

Species

Human

NCBI Accession No.

NP_006316.1

Alternative Names

ARA24, Gsp1, TC4

mRNA Refseq

NM_006325.4

OMIM

601179

Chromosome location

12q24.3

PRODUCT SPECIFICATION

Formulation

Lyophilized

Storage

Store the plasmid at -20C.

cDNA Size

651bp

Preparation before usage

1. Centrifuge at 7000rpm for 1 minute.
 2. Carefully open the vial and add 100ul of sterile water to dissolve the DNA.
- Each tube contains approximately 10ug of lyophilized plasmid.

Vector description

This shuttle vector contains the complete ORF. It is inseted BamH I to Xho I. The gene insert contains multiple cloning sites which can be used to easily cut and transfer the gene and recombination site into your expression vector.

Cloning Vector

pATGen (puc19-derived cloning vector)

General Description

RAN cDNA

Catalog Number: ATGD0018

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.

DATA

Sequence nucleotides

```
ATGGCTGCGC AGGGAGAGCC CCAGGTCCAG TTCAAACCTG TATTGGTTGG TGATGGTGGT ACTGGAAAAA
CGACCTTCGT GAAACGTCAT TTGACTGGTG AATTTGAGAA GAAGTATGTA GCCACCTTGG GTGTTGAGGT
TCATCCCCTA GTGTTCCACA CCAACAGAGG ACCTATTAAG TTCAATGTAT GGGACACAGC CGGCCAGGAG
AAATTCGGTG GACTGAGAGA TGGCTATTAT ATCCAAGCCC AGTGTGCCAT CATAATGTTT GATGTAACAT
CGAGAGTTAC TTACAAGAAT GTGCCTAACT GGCATAGAGA TCTGGTACGA GTGTGTGAAA ACATCCCCAT
TGTGTTGTGT GGCAACAAAG TGGATATTAA GGACAGGAAA GTGAAGGCGA AATCCATTGT CTTCCACCGA
AAGAAGAATC TTCAGTACTA CGACATTTCT GCCAAAAGTA ACTACAACCT TGAAAAGCCC TTCCTCTGGC
TTGCTAGGAA GCTCATTGGA GACCCTAACT TGGAATTTGT TGCCATGCCT GCTCTCGCCC CACCAGAAGT
TGTCATGGAC CCAGCTTTGG CAGCACAGTA TGAGCACGAC TTAGAGGTTG CTCAGACAAC TGCTCTCCCG
GATGAGGATG ATGACCTGTG A
```

Transaction Sequence

```
MAAQGEPQVQ FKLVLVGDGG TGKTTFVKRH LTGEFEKKYV ATLGVEVHPL VFHTNRGPIK FNVWDTAGQE KFGGLRDGY
Y IQAQCAIIMF DVTSRVTYKN VPNWHRDLVR VCENIPIVLC GNKVDIKDRK VKAKSIVFHR KKNLQYYDIS AKSNYNFEKP
FLWLARKLIG DPNLEFVAMP ALAPPEVMD PALAAQYEH DLEVAQTALP DEDDDL
```