

Product datasheet for **RC234359**

RAG2 (NM_001243785) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	RAG2 (NM_001243785) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	RAG2
Synonyms:	RAG-2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC234359 representing NM_001243785
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGTCTCTGCAGATGGTAACAGTCAGTAATAACATAGCCTTAATTCAGCCAGGCTTCTCACTGATGAATT
 TTGATGGACAAGTTTTCTCTTTGGACAAAAAGGCTGGCCAAAAAGATCTGCCCACTGGAGTTTTCCA
 TCTGGATGTAAGCATAACCATGTCAAAGCTGAAGCCTACAATTTCTCTAAGGATTCCTGCTACCTCCCT
 CCTCTTCGCTACCCAGCCACTTGACATTCAAAGGCAGCTGGAGTCTGAAAAGCATCAATACATCATCC
 ATGGAGGGAAAAACACAAACAATGAGGTTTCAGATAAGATTTATGTCATGTCTATTGTTTGAAGAACA
 CAAAAAGTTACTTTTCGCTGCACAGAGAAAGACTTGGTAGGAGATGTTCTGAAGCCAGATATGGTCAT
 TCCATTAATGTGGTGTACAGCCGAGGAAAAGTATGGGTGTTCTTTGGAGGACGCTCATAATGCCTT
 CTACCCACAGAACCACAGAAAAATGGAATAGTGTAGCTGACTGCCTGCCCTGTGTTTTCTGGTGGATT
 TGATTTGGGTGTCTACATCATACATTCTCCAGAACTCAGGATGGGCTATCTTTTCATGTCTCTATT
 GCCAAAAATGACACCATCTATATTTTAGGAGGACATTCCTTGCCAATAATATCCGGCCTGCCAACCTGT
 ACAGAATAAGGGTTGATCTTCCCCTGGGTAGCCAGCTGTGAATTGCACAGTCTTGCCAGGAGGAATCTC
 TGTCTCCAGTGAATCCTGACTCAAATAACAATGATGAATTTGTTATTGTTGGTGGCTATCAGCTTGAA
 AATCAAAAAAGATGATCTGCAACATCATCTTTAGAGGACAACAAGATAGAAATTCGTGAGATGGAGA
 CCCAGATTGGACCCAGACATTAAGCAGCAAGATATGGTTTGAAGCAACATGGGAAATGGAAGTGT
 TTTTCTTGGCATAACCAGGAGACAATAACAAGTTGTTTCAGAAGGATTCTATTTCTATATGTTGAAATGT
 GCTGAAGATGATACTAATGAAGAGCAGACAACATTCACAAACAGTCAAACATCAACAGAAGATCCAGGGG
 ATCCACTCCCTTTGAAGACTCTGAAGAATTTGTTTTCAGTGCAGAAGCAATAGTTTTGATGGTATGA
 TGAATTTGACACCTATAATGAAGATGATGAAGAAGATGAGTCTGAGACAGGCTACTGGATTACATGCTGC
 CCTACTTGTGATGTGGATATCAACACTTGGGTACCATTCTATTCAACTGAGCTCAACAAACCCGCCATGA
 TCTACTGCTCTCATGGGGATGGGCACTGGGTCCATGCTCAGTGCATGGATCTGGCAGAACGCACACTCAT
 CCATCTGTGAGCAGGAAGCAACAAGTATTACTGCAATGAGCATGTGGAGATAGCAAGAGCTTACACACT
 CCCCAAAGAGTCTACCTTAAAAAGCCTCCAATGAAATCCCTCCGTAAAAAGGTTCTGGAAAAATCT
 TGACTCTGCCAAGAAATCCTTTCTTAGAAGGTTGTTTGTAT

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC234359 representing NM_001243785
 Red=Cloning site Green=Tags(s)

MSLQMVTVSNNIALIQPGFSLMNFQGVFFFGQKGWPKRSCPTGVFHLVDVKNHVKLKPTIFSKDSCYLP
 PLRYPATCTFKGSLESEKHQYIIHGGKTPNNEVSDKIYVMSIVCKNNKKVTFRCTEKDLVGDVPEARYGH
 SINVVYSRKGSMGLVFGGRSYMPSTHRTTEKWNVADCLPCVFLVDFEFGCATSYILPELQDGLSFHVS
 AKNDTIYILGGHSLANNIRPANLYRIRVDLPLGSPAVNCTVLPGGISVSSAILTQTNNDEFVIVGGYQLE
 NQKRMICNIIISLEDNKIEIREMETPDWTPDIKHSKIWFSGNMNGTVFLGIPGDNKQVVSEGFYFMYLKC
 AEDDTNEEQTTFTNSQTSTEDPGDSTPFEDSEEFCSAEANSFDGDDEFDYNEDDEESETGYWITCC
 PTCDVDINTWVPFYSTELNKPAMIYCSHGDDHWHVAQCMDLAERTLIHL SAGSNKYCCNEHVEIARALHT
 PQRVLPKPKPPMKSLRKKGSGKILTPAKKSFLRRLFD

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

Sgfl-MluI

Cloning Scheme:


ACCN: NM_001243785

ORF Size: 1581 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_001243785.2](#)

RefSeq Size: 2652 bp

RefSeq ORF: 1584 bp

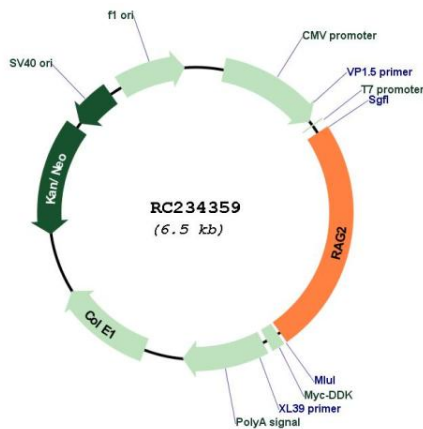
Locus ID: 5897

UniProt ID: [P55895](#)

Cytogenetics: 11p12
Protein Families: Druggable Genome
Protein Pathways: Primary immunodeficiency
MW: 59.7 kDa

Gene Summary: This gene encodes a protein that is involved in the initiation of V(D)J recombination during B and T cell development. This protein forms a complex with the product of the adjacent recombination activating gene 1, and this complex can form double-strand breaks by cleaving DNA at conserved recombination signal sequences. The recombination activating gene 1 component is thought to contain most of the catalytic activity, while the N-terminal of the recombination activating gene 2 component is thought to form a six-bladed propeller in the active core that serves as a binding scaffold for the tight association of the complex with DNA. A C-terminal plant homeodomain finger-like motif in this protein is necessary for interactions with chromatin components, specifically with histone H3 that is trimethylated at lysine 4. Mutations in this gene cause Omenn syndrome, a form of severe combined immunodeficiency associated with autoimmune-like symptoms. [provided by RefSeq, Jul 2008]

Product images:



Circular map for RC234359