

Product datasheet for **RG205065**

RAG2 (NM_000536) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	RAG2 (NM_000536) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	RAG2
Synonyms:	RAG-2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG205065 representing NM_000536
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGTCTCTGCAGATGGTAACAGTCAGTAATAACATAGCCTTAATTCAGCCAGGCTTCTCACTGATGAATT
 TTGATGGACAAGTTTTCTTTGGACAAAAAGGCTGGCCAAAAAGATCCTGCCCACTGGAGTTTTCCA
 TCTGGATGTAAGCATAACCATGTCAAAGCTGAAGCCTACAATTTCTCTAAGGATTCCTGTACCTCCCT
 CCTCTTCGCTACCCAGCCACTTGACATTCAAAGGCAGCTTGGAGTCTGAAAAGCATCAATACATCATCC
 ATGGAGGGAAAAACACAAACAATGAGGTTTTCAGATAAGATTTATGTCATGTCTATTGTTTGAAGAACA
 CAAAAAGTTACTTTTCGCTGCACAGAGAAAGACTTGGTAGGAGATGTTCTGAAGCCAGATATGGTCAT
 TCCATTAATGTGGTGTACAGCCGAGGAAAAGTATGGGTGCTCTTTGGAGGACGCTCATAATGCCTT
 CTACCCACAGAACCACAGAAAAATGGAATAGTGTAGCTGACTGCCTGCCCTGTGTTTTCTGGTGGATT
 TGATTTGGGTGTCTACATCATACATTCTCCAGAACTTCAGGATGGGCTATCTTTTCATGTCTCTATT
 GCCAAAAATGACACCATCTATATTTTAGGAGGACATTCCTTGGCAATAATATCCGGCCTGCCAACCTGT
 ACAGAATAAGGGTTGATCTTCCCCTGGGTAGCCAGCTGTGAATTGCACAGTCTTCCAGGAGGAATCTC
 TGTCTCCAGTGAATCCTGACTCAAATAACAATGATGAATTTGTTATTGTTGGTGGCTATCAGCTTGAA
 AATCAAAAAAGAATGATCTGCAACATCATCTTTAGAGGACAACAAGATAGAAATTCGTGAGATGGAGA
 CCCAGATTGGACCCAGACATTAAGCAGCAAGATATGGTTTGGAAAGCAACACGGGAAATGGAAGTGT
 TTTTCTTGGCATACCAGGAGACAATAACAAGTTGTTTCAGAAGGATTCTATTTCTATATGTTGAAATGT
 GCTGAAGATGATACTAATGAAGAGCAGACAACATTCACAAACAGTCAAACATCAACAGAAGATCCAGGGG
 ATTCCACTCCCTTTGAAGACTCTGAAGAATTTTGTTCAGTGCAGAAGCAAATAGTTTTGATGGTATGA
 TGAATTTGACACCTATAATGAAGATGATGAAGAAGATGAGTCTGAGACAGGCTACTGGATTACATGCTGC
 CCTACTTGTGATGTGGATATCAACACTTGGGTACCATTCTATTCAACTGAGCTCAACAAACCCGCCATGA
 TCTACTGCTCTCATGGGGATGGGCACTGGGTCCATGCTCAGTGCATGGATCTGGCAGAACGCACACTCAT
 CCATCTGTGAGCAGGAAGCAACAAGTATTACTGCAATGAGCATGTGGAGATAGCAAGAGCTCTACACACT
 CCCCAAAGAGTCTACCCTTAAAAAGCCTCCAATGAAATCCCTCCGTAAAAAGGTTCTGGAAAAATCT
 TGACTCTGCCAAGAAATCCTTTCTTAGAAGGTTGTTTGTAT

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>RG205065 representing NM_000536
 Red=Cloning site Green=Tags(s)

MSLQMVTVSNNIALIQPGFLMNFQGVFFFGQKGWPKRSCPTGVFHLVDVKNHVKLKPTIFSKDSCYLP
 PLRYPATCTFKGSLESEKHQYIIHGGKTPNNEVSDKIYVMSIVCKNNKKVTFRCTEKDLVGDVPEARYGH
 SINVVYSRKGSMGALFGGRSYMPSTHRTTEKWNVSADCLPCVFLVDFEFGCATSYILPELQDGLSFHVSI
 AKNDTIYILGGHSLANNIRPANLYRIRVDLPLGSPAVNCTVLPGGISVSSAILTQTNDEFVIVGGYQLE
 NQKRMICNIIISLEDNKIEIREMETPDWTPDIKHSKIWFGSNTGNGTVFLGIPGDNKQVVSEGFYFYLKCC
 AEDDTNEEQTTFTNSQSTSTEDPGDSTPFEDSEEFCSAEANSFDGDDEFDYNEDDEEDESSETGYWITCC
 PTCDVDINTWVPFYSTELNKPAMIYCSHGDPVHVAQCMDLAERTLIHLSAGSNKYCCNEHVEIARALHT
 PQRVLPKPKPPMKSLRKKGSGKILTPAKKSFLRRLFD

TRTRPLE - GFP Tag - V

Restriction Sites:

Sgfl-Mlul

Cloning Scheme:


ACCN: NM_000536

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_000536.1](#), [NP_000527.1](#)

RefSeq Size: 2414 bp

RefSeq ORF: 1584 bp

Locus ID: 5897

UniProt ID: [P55895](#)

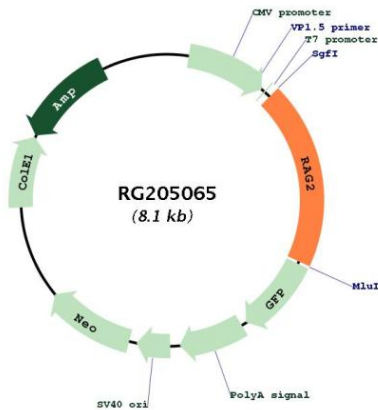
Cytogenetics: 11p12

Protein Families: Druggable Genome

Protein Pathways: Primary immunodeficiency

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 RG205065