

Product datasheet for **SC122564**

RAG2 (NM_000536) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	RAG2 (NM_000536) Human Untagged Clone
Tag:	Tag Free
Symbol:	RAG2
Synonyms:	RAG-2
Vector:	<u>pCMV6-XL5</u>
E. coli Selection:	Ampicillin (100 ug/mL)
Cell Selection:	None



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Fully Sequenced ORF:

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>OriGene sequence for NM_000536 edited
ACTCTCTTTACAGTCAGCCTTCTGCTTGCCACAGTCATAGTGGGCAGTCAGTGAATCTTC
CCCAAGTGCTGACAATTAATACCTGGTTTAGCGGCAAAGATTAGAGAGGGCGTGAGCAGC
CCCTCTGGCCTTCAGACAAAAATCTACGTACCATCAGAACTATGTCTCTGCAGATGGTA
ACAGTCAGTAATAACATAGCCTTAATTCAGCCAGGCTTCTCACTGATGAATTTTGATGGA
CAAGTTTTCTTTGGACAAAAAGGCTGGCCAAAAGATCCTGCCCACTGGAGTTTTTC
CATCTGGATGTAAGCATAACCATGTCAAACCTGAAGCCTACAATTTTCTCTAAGGATTCC
TGCTACCTCCCTCCTCTTCGCTACCCAGCCACTTGACACATTCAAAAGGCAGCTTGGAGTCT
GAAAAGCATCAATACATCATCCATGGAGGGAAAAACACCAAACAATGAGGTTTTAGATAAG
ATTTATGTCATGTCTATTGTTTGAAGAACAACAAAAAGTTACTTTTCGCTGCACAGAG
AAAGACTTGGTAGGAGATGTTCCGAAGCCAGATATGGTCATTCCATTAATGTGGTGAC
AGCCGAGGGAAAAGTATGGGTGCTCTTTGGAGGACGCTCATACATGCCTTCTACCCAC
AGAACCACAGAAAAATGGAATAGTGTAGCTGACTGCCTGCCCTGTGTTTTCTGGTGGAT
TTTGAATTTGGGTGTCTACATCATACATCTTCCAGAACTTCAGGATGGGCTATCTTTT
CATGTCTCTATTGCCAAAAATGACACCATCTATATTTTAGGAGGACATTCCTTGGCAAT
AATATCCGGCCTGCCAACCTGTACAGAATAAGGGTTGATCTTCCCTGGGTAGCCAGCT
GTGAATTGCACAGTCTTGCCAGGAGGAATCTCTGTCTCCAGTGAATCCTGACTCAAAC
AACAAATGATGAATTTGTTATTGTTGGTGGCTATCAGCTTGAAAATCAAAAAAGAATGATC
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ATGTTGAAATGTGCTGAAGATGATACTAATGAAGAGCAGACAACATTCACAAACAGTCAA
ACATCAACAGAAGATCCAGGGGATCCACTCCCTTTGAAGACTCTGAAGAATTTTGTTC
AGTGCAGAAGCAAAATAGTTTTGATGGTGATGATGAATTTGACACCTATAATGAAGATGAT
GAAGAAGATGAGTCTGAGACAGGCTACTGGATTACATGCTGCCCTACTTGTGATGTGGAT
ATCAACACTTGGGTACCATTCTATTCAACTGAGCTCAACAAACCCGCCATGATCTACTGC
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ATCCATCTGTCAGCAGGAAGCAACAAGTATTACTGCAATGAGCATGTGGAGATAGCAAGA
GCTCTACACACTCCCAAGAGTCTACCCTTAAAAAGCCTCCAATGAAATCCCTCCGT
AAAAAAGTTCTGAAAAATCTGACTCCTGCCAAGAAATCCTTTCTTAGAAGTTGTTT
GATTAGTTTTGCAAAAGCCTTTAGATTGAGGTGATGGAAATTTTGAATCTATTTTTAA
AATCATAACATTGATTTTAAAAATACATTTTTGTTTATTTAAAAATGCCTATGTTTTCTTT
TAGTTACATGAATTAAGGGCCAGAAAAAAGTGTATAATGCAATGATAAATAAAGTCAT
TCTAGACCTATAACATTTTAAAAATATTTTACCCAAACTCAATTTACTAATTTATTCT
TCACTGAGGATTTCTGATCTGATTTTTTATTCAACAAACCTTAAACACCCAGAAGCAGTA
ATAATCATCGAGGTATGTTTATATTTATATATGAGTCTTGGTAACAAATAACCTATAAA
GTGTTTATGACAAATTTAGCCAATAAAGAAATTAACACCCAAAAGAATTAATTTGATTAT
TTTGTGCAACATAACAATTCGGCAGTTGGCCAAAACCTTAAAAGCAAGATCTACTACATCC
CACATTAGTGTCTTTATATACCTTCAAGCAACCCTTTGGATTATGCCCATGAACAAGTT
AGTTTCTCATAGCTTTACAGATGTAGATATAAATAAATAATATATGTATACATATAGATAG
ATAATGTTCTCCACTGACACAAAAGAAGAAATAAATAATCTACATCAAAAAAAAAAAAAA
AAAAAAAAAAAAAA
    
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5' Read Nucleotide Sequence:	>OriGene 5' read for NM_000536 unedited GGTCAAATTTGTATACGACTCATATGGGCGGCNCGCAATCGGCCATTACGGCCGGGA CTCTCTTTACAGTCAGCCTTCTGCTTGCCACAGTCATAGTGGGCAGTCAGTGAATCTTCC CCAAGTGTGACAATTAATACCTGGTTTAGCGGCAAAGATTAGAGAGGCGTGAGCAGCC CCTCTGGCCTTACAGACAAAAATCTACGTACCATCAGAACTATGTCTCTGCAGATGGTAA CAGTCAGTAATAACATAGCCTTAATTCAGCCAGGCTTCTCACTGATGAATTTTGATGGAC AAGTTTTCTTTGGACAAAAAGGCTGGCCCAAAGATCCTGCCCACTGGAGTTTTCC ATCTGGATGTAAGCATAACCATGTCAAAGCTGAAGCCTACAATTTCTCTAAGGATTCCT GCTACCTCCCTCCTCTTCTGCTACCCAGCCACTTGCACATTCAAAGGCAGCTTGGAGTCTG AAAAGCATCAATACATCATCCATGGAGGAAAACACCAAACAATGAGGTTTCAGATAAGA TTTATGTCATGTCTATTGTTTGCAAGAACAACAAAAGGTTACTTTTCGCTGCACAGAGA AAGACTTGGTAGGAGATGTTCTGAAGCCAGATATGGTCATTCCATTAATGTGGTGTACA GCCGAGGAAAAGTATGGGTGCTCTCTTTGGAGGACGCTACATACGCCTTCTACCCACA GAAACCACAGAAAATGGAATAGTGTAGCTGACTGCCTGCCCTGTGTTTTCTGGTGGGAT TTGAATTTGGGTGTGCTACATCATACTTCTTCAGAACTTCANGATGGGCTATCTTTTC ATGTCTCTATTGCCAANATGACACATCTATATTTTAGGAGGACATTCAGTCCAATAATA TCCGGCCTGCCAACCTGTACAGAATAAGGA
Restriction Sites:	Please inquire
ACCN:	NM_000536
Insert Size:	2414 bp
OTI Disclaimer:	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
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.
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]

Transcript Variant: This variant (1) represents the shortest transcript. Variants 1, 3 and 4 encode the same protein.