

## Recombinant Human RAG2

**Cat. No.** RAG2-29371TH    **Lot. No.** (See product label)

### SPECIFICATION

<b>Product Overview</b>	Recombinant full length Human RAG2 with N terminal proprietary tag; Predicted MWt 84.04 kDa inclusive of tag.
<b>Species</b>	Human
<b>Source</b>	Wheat Germ
<b>ProteinLength</b>	527 amino acids
<b>Description</b>	<p>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.</p>
<b>Molecular Weight</b>	84.040kDa inclusive of tags
<b>Tissue specificity</b>	Cells of the B- and T-lymphocyte lineages.

 Tel: 1-631-559-9269    1-516-512-3133

 Email: [info@creative-biomart.com](mailto:info@creative-biomart.com)     Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

<b>Form</b>	Liquid
<b>Purity</b>	Proprietary Purification
<b>Storage buffer</b>	pH: 8.00 Constituents: 0.3% Glutathione, 0.79% Tris HCl
<b>Storage</b>	Shipped on dry ice. Upon delivery aliquot and store at -80oC. Avoid freeze / thaw cycles.
<b>Sequences of amino acids</b>	MSLQMVTVSNNIALIQPGFSLMNF DGQVFFFGQKGWPKRS CPTGVFHLDVKHNV KLKPTIFSKDSCYLPPLRYPATCTF KGSLESEKHQYIIHGGKTPNNEVSDKIYVMSIV CKNNKKV TFRCTEKDLVGDVPEARYGHSINVVYSRGKSMGALFGGRS YMPSTHR TTEKWNSVADCLPCVFLVDFEFGCATSYILPEL QDGLSFHVSIKNDTIYILGGHSLA NNIRPANLYRIRVDL PLGSPAVNCTVLPGGISVSSAILTQTNNDEFVIVGGYQLE NQK RMICNIISLEDNKIEIREMETPDWTPDIKHSKIWFSGS NTGNGTVFLGIPGDNKQVVSE GFYFYMLKCAEDDTNEEQT TFTNSQTSTEDPGDSTPFEDSEEFCSAEANSFDGD DEFD TYNEDDEEDESETGYWITCCPTCDVDINTWVPFYSTELNK PAMIYCSHGDD HWVHAQCMDLAERTLIHLSAGSNKYCYCNE HVEIARALHTPQRVLPLKKPPMKSLRK KGSGKILTPAKKS FLRRFLD
<b>Sequence Similarities</b>	Belongs to the RAG2 family. Contains 1 PHD-type zinc finger.
<b>GENE INFORMATION</b>	
<b>Gene Name</b>	RAG2 recombination activating gene 2 [ Homo sapiens ]
<b>Official Symbol</b>	RAG2
<b>Synonyms</b>	RAG2; recombination activating gene 2; V(D)J recombination-activating protein 2;

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<b>Gene ID</b>	5897
<b>mRNA Refseq</b>	NM_000536
<b>Protein Refseq</b>	NP_000527
<b>MIM</b>	179616
<b>Uniprot ID</b>	P55895
<b>Chromosome Location</b>	11p13
<b>Pathway</b>	C-MYB transcription factor network, organism-specific biosystem; Primary immunodeficiency, organism-specific biosystem; Primary immunodeficiency, conserved biosystem;
<b>Function</b>	DNA binding; chromatin binding; endonuclease activity; metal ion binding; methylated histone residue binding;

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