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Datasheet for ABIN7175270  
**anti-RAG2 antibody (AA 296-415)**

1 Image

### Overview

Quantity:	100 µg
Target:	RAG2
Binding Specificity:	AA 296-415
Reactivity:	Human
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This RAG2 antibody is un-conjugated
Application:	ELISA, Immunofluorescence (IF)

### Product Details

Immunogen:	Recombinant Human V(D)J recombination-activating protein 2 protein (296-415AA)
Isotype:	IgG
Cross-Reactivity:	Human
Purification:	>95%, Protein G purified

### Target Details

Target:	RAG2
Alternative Name:	RAG2 ( <a href="#">RAG2 Products</a> )
Background:	Background: Core component of the RAG complex, a multiprotein complex that mediates the DNA cleavage phase during V(D)J recombination. V(D)J recombination assembles a diverse

## Target Details

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repertoire of immunoglobulin and T-cell receptor genes in developing B and T-lymphocytes through rearrangement of different V (variable), in some cases D (diversity), and J (joining) gene segments. DNA cleavage by the RAG complex occurs in 2 steps: a first nick is introduced in the top strand immediately upstream of the heptamer, generating a 3'-hydroxyl group that can attack the phosphodiester bond on the opposite strand in a direct transesterification reaction, thereby creating 4 DNA ends: 2 hairpin coding ends and 2 blunt, 5'-phosphorylated ends. The chromatin structure plays an essential role in the V(D)J recombination reactions and the presence of histone H3 trimethylated at 'Lys-4' (H3K4me3) stimulates both the nicking and hairpinning steps. The RAG complex also plays a role in pre-B cell allelic exclusion, a process leading to expression of a single immunoglobulin heavy chain allele to enforce clonality and monospecific recognition by the B-cell antigen receptor (BCR) expressed on individual B-lymphocytes. The introduction of DNA breaks by the RAG complex on one immunoglobulin allele induces ATM-dependent repositioning of the other allele to pericentromeric heterochromatin, preventing accessibility to the RAG complex and recombination of the second allele. In the RAG complex, RAG2 is not the catalytic component but is required for all known catalytic activities mediated by RAG1. It probably acts as a sensor of chromatin state that recruits the RAG complex to H3K4me3 (By similarity).

Aliases: RAG 2 antibody, RAG-2 antibody, RAG2 antibody, RAG2\_HUMAN antibody, Recombination activating gene 2 antibody, V(D)J recombination activating protein 2 antibody, V(D)J recombination-activating protein 2 antibody

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UniProt: [P55895](#)

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Pathways: [Chromatin Binding](#), [Production of Molecular Mediator of Immune Response](#)

## Application Details

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Application Notes: Recommended dilution: IF:1:50-1:200,

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Restrictions: For Research Use only

## Handling

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Format: Liquid

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Buffer: Preservative: 0.03 % Proclin 300  
Constituents: 50 % Glycerol, 0.01M PBS, pH 7.4

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Preservative: ProClin

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Precaution of Use: This product contains ProClin: a POISONOUS AND HAZARDOUS SUBSTANCE which should be

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## Handling

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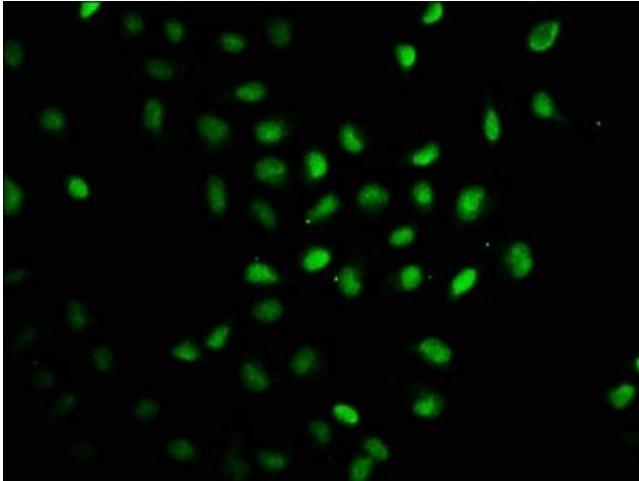
handled by trained staff only.

Storage: -20 °C,-80 °C

Storage Comment: Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.

## Images

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### Immunofluorescence

**Image 1.** Immunofluorescence staining of HeLa cells with ABIN7175270 at 1:100, counter-stained with DAPI. The cells were fixed in 4 % formaldehyde, permeabilized using 0.2 % Triton X-100 and blocked in 10 % normal Goat Serum. The cells were then incubated with the antibody overnight at 4 °C. The secondary antibody was Alexa Fluor 488-conjugated AffiniPure Goat Anti-Rabbit IgG(H+L).