Datasheet for ABIN7555155

RAG2 Protein (AA 1-527) (His tag)

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Overview

Quantity:	1 mg
Target:	RAG2
Protein Characteristics:	AA 1-527
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This RAG2 protein is labelled with His tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Purpose:	Custom-made recombinat RAG2 Protein expressed in mammalien cells.
Sequence:	MSLQMVTVSN NIALIQPGFS LMNFDGQVFF FGQKGWPKRS CPTGVFHLDV KHNHVKLKPT IFSKDSCYLP PLRYPATCTF KGSLESEKHQ YIIHGGKTPN NEVSDKIYVM SIVCKNNKKV TFRCTEKDLV GDVPEARYGH SINVVYSRGK SMGVLFGGRS YMPSTHRTTE KWNSVADCLP CVFLVDFEFG CATSYILPEL QDGLSFHVSI AKNDTIYILG GHSLANNIRP ANLYRIRVDL PLGSPAVNCT VLPGGISVSS AILTQTNNDE FVIVGGYQLE NQKRMICNII SLEDNKIEIR EMETPDWTPD IKHSKIWFGS NMGNGTVFLG IPGDNKQVVS EGFYFYMLKC AEDDTNEEQT TFTNSQTSTE DPGDSTPFED SEEFCFSAEA NSFDGDDEFD TYNEDDEEDE SETGYWITCC PTCDVDINTW VPFYSTELNK PAMIYCSHGD GHWVHAQCMD LAERTLIHLS AGSNKYYCNE HVEIARALHT PQRVLPLKKP PMKSLRKKGS GKILTPAKKS FLRRLFD **Sequence without tag. The proposed Purification-Tag is based on experiences with the expression system, a different complexity of the protein could make another tag necessary. In case you have a special**

Product Details

	request, please contact us.
Characteristics:	Key Benefits: • Made to order protein - from design to production - by highly experienced protein experts. • Protein expressed in mammalien cells and purified in one-step affinity chromatography • The optimized expression system ensures reliability for intracellular, secreted and transmembrane proteins. • State-of-the-art algorithm used for plasmid design (Gene synthesis). This protein is a made-to-order protein and will be made for the first time for your order. Our experts in the lab try to ensure that you receive soluble protein. If you are not interested in a full length protein, please contact us for individual protein fragments. The big advantage of ordering our made-to-order proteins in comparison to ordering custom made proteins from other companies is that there is no financial obligation in case the protein cannot be expressed or purified.
Purity:	> 90 % as determined by Bis-Tris Page, Western Blot
Grade:	custom-made

Target Details

Target:	RAG2
Alternative Name:	RAG2 (RAG2 Products)
Background:	V(D)J recombination-activating protein 2 (RAG-2),FUNCTION: 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 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 haipinning steps. The RAG complex also plays a role in pre-B cell allelic exclusion, a process leading to expression of a single immunoglobulin

Target Details

	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). {ECO:0000250}.
Molecular Weight:	59.2 kDa
UniProt:	P55895
Pathways:	Chromatin Binding, Production of Molecular Mediator of Immune Response

Application Details

Application Notes:	In addition to the applications listed above we expect the protein to work for functional studies as well. As the protein has not been tested for functional studies yet we cannot offer a guarantee though.
Restrictions:	For Research Use only

Handling

Format:	Liquid
Buffer:	The buffer composition is at the discretion of the manufacturer.
Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	12 months