

Active Recombinant Human DEFB4A Protein

Cat. No. DEFB4A-540H Lot. No. (See product label)

SPECIFICATION

Product Overview	Recombinant Human DEFB4A Protein without tag was expressed in E. coli.
Species	Human
Source	E.coli
Description	Defensins (alpha and beta) are cationic peptides with antimicrobial activity against Gram-negative and Gram-positive bacteria, fungi, and enveloped viruses. They are 2-6 kDa proteins and take important roles in innate immune system. On the basis of their size and pattern of disulfide bonding, mammalian defensins are classified into alpha, beta and theta categories. β-Defensins contain a six-cysteine motif that forms three intra-molecular disulfide bonds. Four human β-defensins have been identified and they are expressed on some leukocytes and at epithelial surfaces. Because β-defensins is cationic peptides, they can therefore interact with the membrane of invading microbes, which are negative due to lipopolysaccharides (LPS) and lipoteichoic acid (LTA) found in the cell membrane. Especially, they have higher affinity to the binding site compared to Ca^{2+} and Mg^{2+} ions. Furthermore, they can affect the stability of the membrane.
Form	Sterile Filtered White lyophil
Bio-activity	Fully biologically active when compared to standard. The determined by a chemotaxis bioassay using immature human dendritic cells is in a concentration range of 10-100 ng/mL.

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Molecular Mass	Approximately 4.3 kDa
AA Sequence	GIGDPVTCLKSGAICHPVFCPRRYKQIGTCGLPGTKCCKKP
Endotoxin	Less than 1 EU/μg of rHuBD-2 as determined by LAL method.
Purity	> 98% by SDS-PAGE and HPLC analyses.
Storage	This lyophilized preparation is stable at 2-8 centigrade, but should be kept at -20 centigrade for long term storage, preferably desiccated. Upon reconstitution, the preparation is stable for up to one week at 2-8 centigrade. For maximal stability, apportion the reconstituted preparation into working aliquots and store at -20 to -70 centigrade. Avoid repeated freeze thaw cycles.
Storage Buffer	Lyophilized from a 0.2 μm filtered concentrated solution in 20 mM PB, pH 7.4, 130 mM NaCl.
Reconstitution	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1 % BSA to a concentration of 0.1-1.0 mg/mL.

GENE INFORMATION

Gene Name	DEFB4A defensin, beta 4A [Homo sapiens (human)]
Official Symbol	DEFB4A
Synonyms	DEFB4A; defensin, beta 4A; DEFB2, DEFB4, DEFB102, defensin, beta 2 , defensin, beta 4; beta-defensin 4A; DEFB 2; HBD 2; SAP1; defensin, beta 2; defensin, beta 4; skin-antimicrobial peptide 1; BD-2; DEFB2; DEFB4; HBD-2; DEFB-2; DEFB102;

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Gene ID	1673
mRNA Refseq	NM_004942
Protein Refseq	NP_004933
MIM	602215
UniProt ID	O15263
SDS-PAGE	