DEFB4B
Recombinant Human beta-Defensin 2

Catalog No.	CRB500A	**Quantity:**	5 µg
	CRB500B		20 µg
	CRB500C		1.0 mg

Alternate Names: Beta-defensin-2, BD-2, DEFB-2, DEFB2, DEFB4

Description: Recombinant Human Defensin beta 2 is a single non-glycosylated polypeptide chain containing 41 amino acids.Background: 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. ß-Defensins contain a six-cysteine motif that forms three intra-molecular disulfide bonds. Four human ß-defensins have been identified and they are expressed on some leukocytes and at epithelial surfaces. Because ß-defensins are 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.

Gene ID: 1673

Source: *E. coli*

Molecular Weight: ~4.3 kDa

Formulation: Lyophilized from a 0.2 µm filtered concentrated solution in 20 mM PB, pH 7.4, + 130 mM NaCl.

Purity: >98% as determined by SDS-PAGE and HPLC analyses.

Endotoxin Level: Less than 1 EU/µg of rHuBD-2 as determined by LAL method.

Biological Activity: Fully biologically active when compared to standard. The biological activity determined by a chemotaxis bioassay using immature human dendritic cells is in a concentration range of 10-100 ng/ml.

Amino Acid Sequence: GIGDPVTCLK SGAICHPVFC PRRYKQIGTC GLPGTKCCKK P

Reconstitution: **Centrifuge vial prior to opening.** Add sterile distilled water or aqueous buffer to a concentration of 0.1-1.0 mg/ml. Further dilutions should be made in appropriate buffered solutions.

Storage & Stability: The lyophilized protein is stable at 2-8°C. Upon receipt, store desiccated at -20°C. After reconstitution, the preparation is stable for up to one week at 2-8°C. For maximal stability, apportion the reconstituted preparation into working aliquots and store at -20°C to -80°C. For long term storage of reconstituted protein, it is recommended that a carrier protein such as 0.1% BSA or HSA be added. This depends on the particular application. **Avoid repeated freeze/thaw cycles.**

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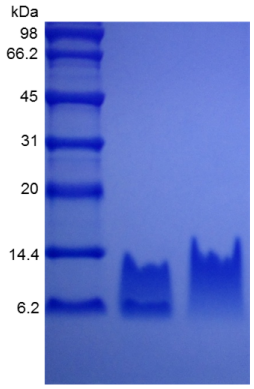
SDS-PAGE



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