

Recombinant Rat Beta Defensin-4 (rr BD-4)

Synonyms: Defensin beta 4 (DEFB4)

Introduction: Defensins are cationic peptides with a large spectrum of antimicrobial activity that comprise an important arm of the innate immune system. The Alpha defensins are differentiated from the Beta-defensins by the pairing of their 3 disulfide bonds.

4 human Beta-defensins have been identified to date; BD-1, BD-2, BD-3 and BD-4.

Beta-defensins are expressed on some leukocytes and at epithelial surfaces.

In addition to their direct antimicrobial activities, they are chemoattractant towards immature dendritic cells and memory T cells. The beta-defensin proteins are expressed as the C-terminal portion of precursors and are released by proteolytic cleavage of a signal sequence and, in the case of BD-1 (36 a.a.), a propeptide region. Beta-defensins contain a six-cysteine motif that forms three intra-molecular disulfide bonds. Beta-Defensins are 3-5 kDa peptides ranging in size from 33-47 amino acid residues.

Description: Recombinant rat Beta Defensin-4 produced in E.Coli is a single, non-glycosylated polypeptide chain containing 41 amino acids and having a molecular mass of 4.4 kDa. The BD-4 is purified by proprietary chromatographic techniques.

Source: *Escherichia Coli*

Physical Appearance: Sterile filtered white lyophilized (freeze-dried) powder.

Formulation: Lyophilized from a 0.2µm filtered solution in PBS, pH-7.4.

The aliquots/samples of 1µg contain Trehalose 5% (w/vol) for better recovery

Solubility: It is recommended to reconstitute the lyophilized rr BD-4 in sterile H₂O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

Stability: Lyophilized rr BD-4 although stable at room temperature for 3 weeks, should be stored desiccated below -18° C. Upon reconstitution rr BD-4 should be stored at 4° C between 2-7 days and for future use below -18° C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

Purity: Greater than 97.0% as determined by SDS-PAGE.

Amino Acid Sequence: QSINNPITCL TKGGVCWGPC TGGFRQIGTC GLPRVRCCKK K.

Biological Activity: Measured by its antimicrobial activity against E. coli the ED₅₀ is typically 5 - 50µg/ml.

This material is offered for research only. Not for use in human. For in vitro use only. ImmunoTools will not be held responsible for patent infringement or other violations that may occur with the use of our products.

<i>small</i>	5 µg	Cat.N°	13344060
<i>medium</i>	20 µg	Cat.N°	13344064

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