

Recombinant Rat Beta Defensin-1 (rr BD-1)

Synonyms: Defensin beta 1 (DEFB1), HBD1, HBP1

Introduction: The Defensin family are highly similar in their protein sequence and are microbicidal & cytotoxic peptides made by neutrophils. Beta Defensin-1 is an antimicrobial peptide having the resistance of epithelial surfaces to microbial colonization. Beta Defensin-1 has close proximity to Defensin Alpha-1 and has been implicated in the pathogenesis of cystic fibrosis. Skin of patients having atopic dermatitis, patients and mycosis fungoides (non-lesional and lesional) show lower human Beta Defensin-1 mRNA expression and higher human Beta Defensin-2 and human Beta Defensin-3 mRNA expression. Beta Defensin is highly expressed by epithelial cells. Beta-Defensin-1 may play a role in the pathogenesis of severe sepsis.

Description: Recombinant rat Beta Defensin-1 produced in E.Coli is a single, non-glycosylated polypeptide chain containing 37 amino acids and having a molecular mass of 4.1 kDa. The BD-1 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 sample size of 1µg contains Trehalose 5% (w/vol) for better recovery

Solubility: It is recommended to reconstitute the lyophilized rr BD-1 in sterile H₂O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

Stability: Lyophilized rr BD-1 although stable at room temperature for 3 weeks, should be stored desiccated below -18° C. Upon reconstitution rr BD-1 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:

- (a) Analysis by RP-HPLC.
- (b) Analysis by SDS-PAGE.

Amino Acid Sequence: DQYRCLQNGG FCLRSSCP SH TKLQGTCKPD KPNCCRS

Biological Activity: Measured by its ability to chemoattract CD34+ dendritic cells using a concentration range of 0.1 - 1.0 µg/ml.

<i>small</i>	5 µg	Cat.N°	13344030
<i>medium</i>	20 µg	Cat.N°	13344034

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