

## 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 H<sub>2</sub>O 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.

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

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