



## Beta Defensin-3, rat recombinant (rrBD-3)

**Catalog No:** 97414  
**Lot No:** XXXXX  
**Source:** *E. coli*  
**Synonyms:** Beta-defensin 3, BD-3, Defensin beta 3, Defb3

### Background

Defensins form a family of microbicidal and cytotoxic peptides made by neutrophils. Members of the defensin family are highly similar in protein sequence. This gene encodes defensin, beta 103A, which has broad spectrum antimicrobial activity and may play an important role in innate epithelial defense.

### Description

BD-3 rat recombinant produced in *E. coli* is a single, non-glycosylated polypeptide chain containing 41 amino acids and having a molecular mass of 4.5 kDa. BD-3 is purified by proprietary chromatographic techniques.

### Physical Appearance

Sterile filtered white lyophilized (freeze-dried) powder.

### Formulation

BD-3 protein was lyophilized from a 0.2 µm filtered concentrated solution in PBS, pH 7.4.

### Solubility

It is recommended to reconstitute the lyophilized Beta Defensin-3 in sterile 18 MΩ-cm H<sub>2</sub>O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

### Stability

Lyophilized BD-3, although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution BD-3 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 98.0% as determined by (a) Analysis by RP-HPLC, (b) Analysis by SDS-PAGE.

### Amino Acid Sequence

KKVYNAVSCM TNGGICWLKC SGTFREIGSC GTRQLKCKK K

### Activity

Measured by its antimicrobial activity against *E. coli*. The ED<sub>50</sub> for this effect is typically 4 - 20 µg/ml, corresponding to a specific activity of 50,000 - 250,000 units/mg.

### Usage

**This product is offered by Biomol for research purposes only. Not for diagnostic purposes or human use. It may not be resold or used to manufacture commercial products without written approval of Biomol GmbH.**

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