



## Product Datasheet

<b>Product Name</b>	Beta Defensin-4 Human Recombinant
<b>Cata No</b>	CB501333
<b>Source</b>	<i>Escherichia Coli.</i>
<b>Synonyms</b>	HBD-4, DEFB-4, HBD4, DEFB104B, Beta-defensin 4, BD-4.

### Description

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.

Beta Defensin-4 Human Recombinant produced in E.Coli is a single, non-glycosylated polypeptide chain containing 50 amino acids and having a molecular mass of 6 kDa.

The BD-4 is purified by proprietary chromatographic techniques.

### Physical Appearance

Sterile Filtered White Lyophilized (freeze-dried) powder.

### Biological Activity

Determined by its ability to chemoattract human monocytes using a concentration range of 0.1-50 ng/ml.

### Purity

Greater than 98.0% as determined by:

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

### Formulation

The DEFB-4 (1mg/ml) was lyophilized with 20mM PBS pH-7.4 and 130mM NaCl.

### Reconstitution

It is recommended to reconstitute the lyophilized Beta Defensin-4 in sterile 18MΩ-cm H<sub>2</sub>O not less than 100µg/ml, which can then be further diluted to other aqueous solutions.

### Stability

Lyophilized Beta Defensin-4 Recombinant 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.

**Please prevent freeze-thaw cycles.**

### Sequence

EFELDRICGY GTARCRKKCR SQEYRIGRCP  
NTYACCLRKW DESLLNRTKP

**\* For Non-Clinical Research Use Only \***



# California Bioscience

---

83103 Avenue 48, Ste.1B #204  
Coachella, CA 92236 USA  
Phone : +1.6268339877  
Email : [info@cali-bio.com](mailto:info@cali-bio.com)

## Product Datasheet

**\* For Non-Clinical Research Use Only \***