

## BD 4 Human

**Description:** 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.

**Synonyms:** HBD-4, DEFB-4, HBD4, DEFB104B, Beta-defensin 4, BD-4.

**Source:** Escherichia Coli.

**Physical Appearance:** Sterile Filtered White lyophilized (freeze-dried) powder.

**Amino Acid Sequence:** EFELDRICGY GTARCRKKCR SQEYRIGRCP NTYACCLRKW  
DESLNRTKP.

**Purity:** Greater than 98.0% as determined by: (a) Analysis by RP-HPLC. (b) Analysis by SDS-PAGE.

**Formulation:**

The DEFB4 (1mg/ml) was lyophilized with 20mM sodium Phosphate buffer pH-7.4 and 130mM NaCl.

**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.

**Usage:**

NeoBiolab's products are furnished for LABORATORY RESEARCH USE ONLY. They may not be used as drugs, agricultural or pesticidal products, food additives or household chemicals.

**Solubility:**

It is recommended to reconstitute the lyophilized Beta Defensin-4 in sterile 18M-cm H2O not less than 100µg/ml, which can then be further diluted to other aqueous solutions.

**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.

**Biological Activity:**

Determined by its ability to chemoattract human monocytes using a concentration range of 0.1-50 ng/ml, corresponding to a specific activity of 20,000-10,000,000 units/mg.

Catalog #:CYP5-606

For research use only.