

Recombinant Human Defensin, Beta 104A

Cat. No. DEFB104A-85H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human Defensin, Beta 104A 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.
Species	Human
Source	E.coli
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.
Physical Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Purity	Greater than 98.0% as determined by: (a) Analysis by RP-HPLC. (b) Analysis by

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	SDS-PAGE.
Formulation	The DEFB-4 (1 mg/ml) was lyophilized with 20 mM PBS pH-7.4 and 130 mM NaCl.
Solubility	It is recommended to reconstitute the lyophilized Beta Defensin-4 in sterile 18 MΩ-cm H ₂ O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.
Specific Activity	Determined by its ability to chemoattract human monocytes using a concentration range of 0.1-50 ng/ml.
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.

GENE INFORMATION

Gene Name	DEFB104A defensin, beta 104A [Homo sapiens]
Synonyms	DEFB104A; DEFB4; BD-4; DEFB-4; DEFB104; MGC118942; MGC118944; MGC118945; hBD-4; defensin, beta 104A; defensin, beta 4; Beta-defensin 4; Defensin, beta 104
Gene ID	140596
mRNA Refseq	NM_080389
Protein Refseq	NP_525128
UniProt ID	Q8WTQ1

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Chromosome	8p23.1
Location	