

# Recombinant Human BD-4

<b>CATALOG #:</b>	4525-20	20 µg
	4525-1000	1 mg
<b>LOT #:</b>	_____	
<b>SYNONYMS:</b>	HBD-4, DEFB-4, Beta-defensin 4	
<b>SOURCE:</b>	<i>E. coli</i>	
<b>PURITY:</b>	>98% by SDS-PAGE and RP-HPLC analyses	
<b>FORM:</b>	Sterile filtered and lyophilized from 20 mM PBS, pH 7.4 and 130 mM NaCl.	

## RECONSTITUTION:

Centrifuge the vial prior to opening. Reconstitute in sterile ddH<sub>2</sub>O to a concentration ≥ 100 µg/ml. This solution can then be diluted into other aqueous buffers and stored at 4 °C for 2-7 days and at -20 °C for future use.

## STORAGE CONDITIONS:

The lyophilized protein is best-stored desiccated at -20 °C. Reconstituted human BD-4 should be stored in working aliquots at -20 °C.

## 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. Four 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. Beta-defensin proteins are expressed as the C-terminal portion of precursors and are released by proteolytic cleavage of a signal sequence (for BD-1 a propeptide region). Beta-defensins contain a six-cysteine motif that forms three intra-molecular disulfide bonds. Beta Defensin-4 Human Recombinant produced in *E. coli* is a single, non-glycosylated polypeptide chain containing 50 amino acids. The BD-4 is purified by proprietary chromatographic techniques.

## AMINO ACID SEQUENCE: (MW 6 kDa)

EFELDRICGY GTARCRKKCR SQEYRIGRCP NTYACCLRKW DESLLNRTKP

## BIOLOGICAL ACTIVITY:

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

FOR RESEARCH USE ONLY. Not to be used in humans.

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