



Technical Data Sheet

Recombinant Human beta-Defensin 4 (rHuBD-4)

Human beta-Defensin 4

Defensins (alpha and beta) are cationic peptides with a broad spectrum of antimicrobial activity that comprise an important arm of the innate immune system. The α -defensins are distinguished from the β -defensins by the pairing of their three disulfide bonds. To date, four human β -defensins have been identified; BD-1, BD-2, BD-3 and BD-4. The β -defensin proteins are expressed as the C-terminal portion of precursors and are released by proteolytic cleavage of a signal sequence. β -defensins contain a six-cysteine motif that forms three intra-molecular disulfide bonds. β -defensins are 3-5 kDa peptides ranging in size from 33-47 amino acid residues. BD-4 is expressed in testis, stomach, uterus, neutrophils, thyroid, lung and kidney. In addition to its direct antimicrobial activities, BD-4 is chemoattractant towards human blood monocytes.

Catalog Number:	RC220-15
Source:	<i>Escherichia coli</i> .
Molecular Weight:	Approximately 6.0 KDa, a single non-glycosylated polypeptide chain containing 50 amino acids.
Quantity:	5ug/20ug/1mg
Purity:	>98% by SDS-PAGE and HPLC analyses.
Biological Activity:	Determined by its ability to chemoattract human monocytes using a concentration range of 0.1-100.0 ng/ml.
Physical Appearance:	Sterile Filtered White lyophilized (freeze-dried) powder.
Formulation:	Lyophilized from a 0.2 μ m filtered concentrated (1.0mg/ml) solution in 20mM PB, pH 7.4, 130mM NaCl.
AA Sequence:	EFELDRICGY GTARCRKKCR SQEYRIGRCP NTYACCLRKW DESLLNRTKP
Endotoxin:	Less than 1EU/ μ g of rHuBD-4 as determined by LAL method.
Reconstitution:	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1% BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at \leq -20°C. Further dilutions should be made in appropriate buffered solutions.
Storage:	This lyophilized preparation is stable at 2-8°C, but should be kept at -20°C for long term storage, preferably desiccated. Upon reconstitution, the preparation is stable for up to one week at 2-8°C. For maximal stability, apportion the reconstituted



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Usage:

preparation into working aliquots and store at -20°C to -70°C . **Avoid repeated freeze/thaw cycles.**

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