

## Overview

<b>Synonyms</b>	Beta-defensin 1, BD-1, rBD-1, Defensin beta 1, Defb1.
<b>Description</b>	Defensin are 3-4 kDa antimicrobial peptides of which three distinct families have been identified; $\alpha$ -defensin, $\beta$ -defensins, and insect defensins. Rat $\beta$ -Defensin 1, as a member of the $\beta$ -defensin family, is a salt-sensitive antimicrobial peptide present in epithelia of the lung and urogenital tract. The predicted amino acid sequence shows the hallmark features of other known epithelial $\beta$ -defensins, including the ordered array of six cysteine residues.
<b>Species</b>	Rat
<b>Source</b>	<i>E. coli</i>
<b>Biological Activity</b>	Fully biologically active when compared to standard. The biological activity determined by a chemotaxis bioassay using CD34+ dendritic cells is in a concentration range of 100.0-1000.0 ng/ml.
<b>Sequence</b>	DQYRCLQNGGFCLRSSCPHSHTKLGTCCKPDKPNCCRS

## Properties

<b>Measured Molecular Weight</b>	Approximately 4.1 kDa, a single non-glycosylated polypeptide chain containing 37 amino acids.
<b>Purity</b>	> 95 % by SDS-PAGE and HPLC analyses.
<b>Formulation</b>	Lyophilized from a 0.2 $\mu$ m filtered concentrated solution in 20 mM PBS, 500 mM NaCl, pH 7.0.
<b>Reconstitution</b>	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 d -20 °C. Further dilutions should be made in appropriate buffered solutions.
<b>Endotoxin Level</b>	Less than 1 EU/ $\mu$ g of rRtBD-1 as determined by LAL method.
<b>Physical Appearance</b>	Sterile Filtered White lyophilized (freeze-dried) powder.
<b>Storage</b>	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 preparation into working aliquots and store at -20 °C to -70 °C. <b>Avoid repeated freeze/thaw cycles.</b>

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