

Active Recombinant Rat Defb3

Cat. No. Defb3-8422R **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Rat Defb3 was expressed in E. coli.
Species	Rat
Source	E.coli
Description	Beta defensin-3, also known as BD-3 and DEFB-3, is a membrane active cationic peptide that functions in inflammation and innate immune responses and coded by Defb 3 gene on chromosome 8 in mouse. There are at least 30 β -defensins which are distinguished from α -defensins by the connectivity pattern of their three intramolecular disulfide bonds. BD3 is widely expressed among epithelial tissues, notably by keratinocytes and airway epithelial cells. It is upregulated in response to proinflammatory cytokines, microbial and viral infections, and at the edges of skin wounds. BD3 induction in osteoarthritis chondrocytes promotes MMP1 and 13 productions and inhibits TIMP1 and 2 expressions.
Form	Lyophilized from a 0.2 μ m filtered concentrated solution in PBS, pH 7.4.
Bio-activity	Fully biologically active when compared to standard. Measured by its antimicrobial activity against E. coli. The ED50 for this effect is typically 4-20 μ g/ml.
Molecular Mass	Approximately 4.5 kDa, a single non-glycosylated polypeptide chain containing 41 amino acid residues.
AA Sequence	KKVYNAVSCM TNGGICWLKC SGTFREIGSC GTRQLKCKKK K

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Endotoxin	Less than 1EU/μg of rRtBD-3 as determined by LAL method.
Purity	>95% by SDS-PAGE and HPLC analyses.
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 preparation into working aliquots and store at -20°C to -70°C. Avoid repeated freeze/thaw cycles.
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 ≤-20°C. Further dilutions should be made in appropriate buffered solutions.

GENE INFORMATION

Gene Name	Defb3 beta-defensin 3 [<i>Rattus norvegicus</i> (Norway rat)]
Official Symbol	Defb3
Synonyms	Defb3; beta-defensin 3; BD-3; defensin, beta 3
Gene ID	641623
mRNA Refseq	NM_001037548
Protein Refseq	NP_001032637
UniProt ID	Q32ZI4

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Chromosome Location	16q12.4-q12.5
Pathway	Beta defensins, organism-specific biosystem; Defensins, organism-specific biosystem; Immune System, organism-specific biosystem