

**DATASHEET**

Version 20181206

**BD-3, Rat****Cat. No.:** Z02947-5**Size:** 5.0 ug**Synonyms:** Beta-defensin 3, BD-3, Defensin beta 3, Defb3**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  $\beta$ -defensins which are distinguished from  $\alpha$ -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 up-regulated 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.

**Amino Acid Sequence:**

00001 KKVYNAVSCM TNGGICWLKC SGTFREIGSC GTRQLKCKKK  
00041 K

**Source:** *E. coli***Species:** Rat**Biological Activity:** Fully biologically active when compared to standard. Measured by its antimicrobial activity against *E. coli*. The ED<sub>50</sub> for this effect is typically 4-20  $\mu$ g/ml.**Molecular Weight:** Approximately 4.5 kDa, a single non-glycosylated polypeptide chain containing 41 amino acids.**Formulation:** Lyophilized from a 0.2  $\mu$ m filtered concentrated solution in PBS, pH 7.4.**Appearance:** Sterile Filtered White lyophilized (freeze-dried) powder.**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.**Purity:** > 95 % by SDS-PAGE and HPLC analyses.**Endotoxin Level:** Less than 1 EU/ $\mu$ g of rRtBD-3 as determined by LAL method.**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.