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# BD-3

Catalog # PVGS1133

## Product Information

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| **Primary Accession** | Q9WTL0 |
| **Species** | Mouse |
| **Sequence** | Lys23-Lys63 |
| **Purity** | > 95% as analyzed by SDS-PAGE<br>> 95% as analyzed by HPLC |
| **Endotoxin Level** | |
| **Biological Activity** | Fully biologically active when compared to standard. The $ED_{50}$ as determined by anti-microbial activity against E.coli is less than 20.0 g/ml, corresponding to a specific activity of > 50.0 IU/mg. |
| **Expression System** | E. coli |
| **Theoretical Molecular Weight** | 4.6 kDa |
| **Formulation** | Lyophilized from a 0.2 m filtered solution in 2 × PBS, pH 7.4. |
| **Reconstitution** | It is recommended that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute the lyophilized powder in sterile distilled water or aqueous buffer containing 0.1% BSA to a concentration of 0.1-1.0 mg/ml. |
| **Storage & Stability** | Upon receiving, this product remains stable for up to 6 months at -70°C or -20°C. Upon reconstitution, the product should be stable for up to 1 week at 4°C or up to 3 months at -20°C. Avoid repeated freeze-thaw cycles. |

## Additional Information

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| **Gene ID** | 27358 |
| **Other Names** | Beta-defensin 3, BD-3, mBD-3, Defensin, beta 3, Defb3, Bd3 |
| **Target Background** | 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. |

## Protein Information

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| **Name** | Defb3 |
| **Synonyms** | Bd3 |
| **Function** | Antimicrobial activity against Gram-negative bacteria E.coli and P.aeruginosa. |
| **Cellular Location** | Secreted. |
| **Tissue Location** | Highest expression in salivary glands, epididymis, ovary and pancreas and to a lesser extent in lung, liver and brain. Low or no expression in skeletal muscle and tongue |