

**TECHNICAL DATA SHEET**

**Recombinant Human BD-5 (Carrier-Free)**

Catalog Number: 21-9175

**RPx-Pro™ Recombinant Protein**  
**PRODUCT INFORMATION**

**CONTENTS**

Recombinant Human BD-5 (Carrier-Free)

**DESCRIPTION**

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  $\alpha$ -defensins are distinguished from the  $\beta$ -defensins by the pairing of their three disulfide bonds. To date, six human  $\beta$ -defensins have been identified; BD-1, BD-2, BD-3, BD-4, BD-5 and BD-6.  $\beta$ -defensins are expressed on some leukocytes and at epithelial surfaces. In addition to their direct antimicrobial activities, they can act as chemoattractants towards immature dendritic cells and memory T cells. The  $\beta$ -defensin proteins are expressed as the C-terminal portion of precursors, and are released by proteolytic cleavage of a signal sequence and, in some cases, a propeptide sequence.  $\beta$ -defensins contain a six-cysteine motif that forms three intra-molecular disulfide bonds.

**MOLECULAR MASS**

Recombinant Human BD-5 is a 57.8 kDa protein containing 51 amino acid residues.

**AMINO ACID SEQUENCE**

GLDFSQPFPS GFAVCECK LGRGKCRKEC LENEKPDGNC RLNFLCCRQR I

**SOURCE**

E. coli

**APPLICATIONS**

Bioassay

**PURITY**

98 %

**STORAGE**

-20°C

**PROTEIN CONTENT**

Content Verified by UV Spectroscopy and/or SDS-PAGE gel.

**ENDOTOXIN LEVEL**

Endotoxin level is <0.1 ng/ $\mu$ g of protein (<1EU/ $\mu$ g).

**AUTHENTICITY**

Verified by N-terminal and Mass Spectrometry analyses (when applicable).

**CROSS REACTIVITY**

N/A

**BIOACTIVITY**

Data not available at this time.

**RESEARCH AREAS**

Immune System, Chemotaxis

**RECONSTITUTION**

See Certificate of Analysis (COA) for lot specific reconstitution information.

**REFERENCES**

Biswas A. Arch Dis Child. 2017 Dec 8. pii: archdischild-2017-314276. doi: 10.1136/archdischild-2017-314276. Power M, Uphoff EP, Stewart-Knox B, Small N, Doherty B, Pickett KE. J Public Health (Oxf). 2017 Mar 28;1-9. doi: 10.1093/pubmed/idx029.

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