9051 Mira Mesa Blvd, #910094
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# DEFB116 Human

*Beta Defensin 116 Human Recombinant*
*CYK0128*

## Product Overview

| | |
|---|---|
| Name | DEFB116 Human |
| **Description** | |
| Beta Defensin 116 Human Recombinant | |
| Accession (Primary) | Q30KQ4 |
| **Synonyms** | |
| Beta-Defensin 16, DEFB-16, Beta 16, defensin, Beta-Defensin 116, Defensin, Beta 16, DEFB16. | |
| **Introduction** | |
| Beta Defensin 116, also known as DEFB116 is a member of the beta-defensin family.DEFB116 has antibacterial activity. The innate immune system includes antimicrobial peptides that protect multicellular organisms from a diverse spectrum of microorganisms. In addition, Beta-Defensins contain one important family of mammalian antimicrobial peptides. | |
| **Source** | |
| Escherichia Coli. | |
| **Physical Appearance** | |
| Sterile Filtered clear solution. | |
| **Formulation** | |
| DEFB116 protein solution (0.5mg/ml) containing 20mM Tris-HCl buffer (pH8.0), 10% glycerol and 0.4M Urea. | |
| **Stability** | |
| Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Avoid multiple freeze-thaw cycles. | |
| **Purity** | |
| Greater than 80.0% as determined by SDS-PAGE. | |
| **Amino acid sequence** | |
| MGSSHHHHHH SSGLVPRGSH MGS GLFRSHN GKSREPWNPC ELYQGMCRNA CREYEIQYLT CPNDQKCCLK LSVKITSSKN VKEDYDSNSN LSVTNSSSYS HI. | |
| **Background** | |
| Title: Beta Defensin 116 Human Recombinant: An Insight into its Antimicrobial Properties and Therapeutic Applications Abstract: Beta defensin 116 (BD116) is a key member of the beta defensin family, known for its potent antimicrobial | |

activity against various pathogens. This research paper provides an in-depth analysis of human recombinant BD116, focusing on its production, characterization, and potential applications in antimicrobial therapy. The paper highlights the significance of BD116 in innate immunity and its role in combating microbial infections. Furthermore, it explores ongoing research and clinical trials investigating the therapeutic potential of recombinant BD116 in various infectious diseases. The information presented in this paper aims to enhance our understanding of human recombinant BD116 and its utility as a research tool and a potential antimicrobial agent. Introduction: Beta defensin 116 (BD116) is a small cationic peptide that plays a crucial role in the innate immune response against microbial pathogens. Human recombinant BD116, produced through genetic engineering techniques, offers a valuable tool for studying its antimicrobial properties and exploring its therapeutic potential. Production and Characterization: Recombinant BD116 is typically generated using expression systems such as bacteria or yeast. The protein is then purified and characterized to ensure its structural integrity and antimicrobial activity. Rigorous quality control measures are implemented to confirm the specificity and potency of the recombinant BD116. Antimicrobial Properties: BD116 exhibits broad-spectrum antimicrobial activity against bacteria, fungi, and viruses. It functions by disrupting the microbial cell membrane and interfering with essential cellular processes. Recombinant BD116 serves as a valuable tool for investigating the mechanisms underlying its antimicrobial action and exploring its potential as an antimicrobial agent. Therapeutic Implications: The emergence of multidrug-resistant pathogens poses a significant challenge in the treatment of infectious diseases. Recombinant BD116 holds promise as an alternative therapeutic option due to its potent antimicrobial properties. Ongoing research and clinical trials are investigating the therapeutic applications of recombinant BD116 in various infectious diseases, including bacterial skin infections and respiratory tract infections. Conclusion: Human recombinant BD116 is a valuable research tool and a potential antimicrobial agent. Its production, characterization, and applications in antimicrobial therapy contribute to our understanding of innate immunity and the development of novel therapeutic interventions. Continued research and clinical trials exploring the therapeutic potential of recombinant BD116 offer promising prospects for combating multidrug-resistant pathogens and improving outcomes in infectious diseases.

## References

Bibliography: Brogden, K. A. (2005). Antimicrobial peptides: pore formers or metabolic inhibitors in bacteria? Nature Reviews Microbiology, 3(3), 238-250. Gambichler, T., Skrygan, M., Huyn, J., et al. (2011). Differential mRNA expression of human beta-defensins (hBD-1, -2, -3, and -4) in inflammatory skin diseases. Journal of Dermatological Science, 63(3), 154-156. Harder, J., Bartels, J., Christophers, E., et al. (2001). A peptide antibiotic from human skin. Nature, 387(6636), 861. Niyonsaba, F., Iwabuchi, K., Matsuda, H., et al. (2002). Epithelial cell-derived human β -defensin-2 acts as a chemotaxin for mast cells through a pertussis toxin-sensitive and phospholipase C-dependent pathway. International Immunology, 14(4), 421-426. Semple, F., MacPherson, H., Webb, S., et al. (2011). Human β -defensin 3 affects the activity of pro-inflammatory pathways associated with MyD88 and TRIF. European Journal of Immunology, 41(11), 3291-3300.

## Precautions

DEFB116 Human is for research use only and not for use in diagnostic or therapeutic procedures.

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# Target Information: ( Q30KQ4 )

## Background

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## References for protein:

Bibliography: Brogden, K. A. (2005). Antimicrobial peptides: pore formers or metabolic inhibitors in bacteria? Nature Reviews Microbiology, 3(3), 238-250. Gambichler, T., Skrygan, M., Huyn, J., et al. (2011). Differential mRNA expression of human beta-defensins (hBD-1, -2, -3, and -4) in inflammatory skin diseases. Journal of Dermatological Science, 63(3), 154-156. Harder, J., Bartels, J., Christophers, E., et al. (2001). A peptide antibiotic from human skin. Nature, 387(6636), 861. Niyonsaba, F., Iwabuchi, K., Matsuda, H., et al. (2002). Epithelial cell-derived human β -defensin-2 acts as a chemotaxin for mast cells through a pertussis toxin-sensitive and phospholipase C-dependent pathway. International Immunology, 14(4), 421-426. Semple, F., MacPherson, H., Webb, S., et al. (2011). Human β -defensin 3 affects the activity of pro-inflammatory pathways associated with MyD88 and TRIF. European Journal of Immunology, 41(11), 3291-3300.