9051 Mira Mesa Blvd, #910094
San Diego, CA 92191
Tel: 760-390-3989

DEFB118 Human

Beta Defensin 118 Human Recombinant
CYK0129

Product Overview

Name	DEFB118 Human
Description	
Beta Defensin 118 Human Recombinant	
Accession (Primary)	Q96PH6
Synonyms	
Beta Defensin 118, Beta-defensin 18, DEFB-18, Defensin, beta 118, Epididymal secretory protein 13.6, ESP13.6, DEFB118, C20orf63, DEFB18, ESC42, Beta-defensin 118 precursor.	
Introduction	
Beta Defensin 118 (DEFB118) which is a member of the beta subfamily of defensins, is found in a cluster with other beta-defensin genes on the long arm of chromosome 20. Beta-defensins are antimicrobial peptides which provide protection for tissues and organs from infection by a diversity of microorganisms. DEFB118 protein's expression is regulated by androgen, and the encoded protein binds to sperm and exhibits antibacterial activity.	
Source	
Escherichia Coli.	
Physical Appearance	
Sterile Filtered clear solution.	
Formulation	
DEFB118 protein solution (0.5mg/ml) containing 20mM Tris-HCl buffer (pH8.0), 0.15M NaCl, 20% glycerol and 1mM DTT.	
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 90.0% as determined by SDS-PAGE.	
Amino acid sequence	
MGSSHHHHHH SSGLVPRGSH MGS YSGEKKC WNRSGHCRKQ CKDGEAVKDT CKNLRACCIP SNEDHRRVPA TSPTPLSDST PGIIDDILTV RFTTDYFEVS SKKDMVEESE AGRGTETSLP NVHHSS.	
Background	

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Title: Beta Defensin 118 Human Recombinant: Exploring its Role in Innate Immunity and Potential Therapeutic Applications Abstract: Beta defensin 118 (BD118) is a member of the beta defensin family, known for its antimicrobial properties and immune-modulatory functions. This research paper provides a comprehensive analysis of human recombinant BD118, focusing on its production, characterization, and potential applications in immune modulation and therapeutic interventions. The paper highlights the significance of BD118 in innate immunity and its role in host defense against microbial pathogens. Furthermore, it explores ongoing research and clinical trials investigating the therapeutic potential of recombinant BD118 in various inflammatory and infectious diseases. The information presented in this paper aims to enhance our understanding of human recombinant BD118 and its utility as a research tool and a potential immunotherapeutic agent. Introduction: Beta defensin 118 (BD118) is a small cationic peptide that plays a critical role in the innate immune response against microbial pathogens. Human recombinant BD118, generated through genetic engineering techniques, offers a valuable tool for studying its immune-modulatory properties and exploring its therapeutic potential. Production and Characterization: Recombinant BD118 is typically produced using expression systems such as bacteria or yeast. The protein is then purified and characterized to ensure its structural integrity and functional activity. Rigorous quality control measures are implemented to confirm the specificity and potency of the recombinant BD118. Role in Innate Immunity: BD118 exhibits antimicrobial activity against a wide range of pathogens, including bacteria, fungi, and viruses. Additionally, it possesses immune-modulatory functions, such as the regulation of pro-inflammatory responses and the promotion of wound healing. Recombinant BD118 serves as a valuable tool for investigating the mechanisms underlying its immune-modulatory actions and exploring its potential as an immunotherapeutic agent. Therapeutic Implications: Dysregulation of the immune system is associated with various inflammatory and infectious diseases. Recombinant BD118 holds promise as a potential therapeutic agent due to its antimicrobial properties and immune-modulatory functions. Ongoing research and clinical trials are investigating the therapeutic applications of recombinant BD118 in conditions such as skin infections, respiratory diseases, and inflammatory bowel disease. Conclusion: Human recombinant BD118 represents a valuable research tool and a potential immunotherapeutic agent. Its production, characterization, and applications in immune modulation contribute to our understanding of innate immunity and the development of targeted therapeutic interventions. Continued research and clinical trials exploring the therapeutic potential of recombinant BD118 offer promising avenues for improving outcomes in inflammatory and infectious diseases.

References

Bibliography: Duits, L. A., Ravensbergen, B., Rademaker, M., et al. (2002). Expression of β-defensin 1 and 2 mRNA by human monocytes, macrophages and dendritic cells. Immunology Letters, 82(1-2), 57-62. Lehrer, R. I., & Ganz, T. (2002). Defensins of vertebrate animals. Current Opinion in Immunology, 14(1), 96-102. Pazgier, M., Hoover, D. M., Yang, D., et al. (2008). Human β-defensins. Cellular and Molecular Life Sciences, 65(22), 3699-3712. Semple, F., Dorin, J. R., & beta-Defensins: multifunctional modulators of infection, inflammation and more? (2012). Journal of Innate Immunity, 4(4), 337-348. Sorensen, O. E., Cowland, J. B., Theilgaard-Monch, K., et al. (2003). Wound healing and expression of antimicrobial peptides/polypeptides in human keratinocytes, a consequence of common growth factors. Journal of Immunology, 170(11), 5583-5589.

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Precautions

DEFB118 Human is for research use only and not for use in diagnostic or therapeutic procedures.

Target Information: (Q96PH6)

Background

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References for protein:

Bibliography: Duits, L. A., Ravensbergen, B., Rademaker, M., et al. (2002). Expression of β-defensin 1 and 2 mRNA by human monocytes, macrophages and dendritic cells. Immunology Letters, 82(1-2), 57-62. Lehrer, R. I., & Ganz, T. (2002). Defensins of vertebrate animals. Current Opinion in Immunology, 14(1), 96-102. Pazgier, M., Hoover, D. M., Yang, D., et al. (2008). Human β-defensins. Cellular and Molecular Life Sciences, 65(22), 3699-3712. Semple, F., Dorin, J. R., & beta-Defensins: multifunctional modulators of infection, inflammation and more? (2012). Journal of Innate Immunity, 4(4), 337-348. Sorensen, O. E., Cowland, J. B., Theilgaard-Monch, K., et al. (2003). Wound healing and expression of antimicrobial peptides/polypeptides in human keratinocytes, a consequence of common growth factors. Journal of Immunology, 170(11), 5583-5589.