9051 Mira Mesa Blvd, #910094
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BAFF R Human

B-cell Activating Factor Receptor Human Recombinant
CYK0065

Product Overview

Name	BAFF R Human
Description	
B-cell Activating Factor Receptor Human Recombinant	
Accession (Primary)	Q96RJ3
Synonyms	
TNFRSF13C, CD268, BAFF-R, MGC138235, B cell-activating factor receptor.	
Introduction	
B cell-activating factor (BAFF) enhances B-cell survival in vitro and is a regulator of the peripheral B-cell population. Overexpression of Baff in mice results in mature B-cell hyperplasia and symptoms of systemic lupus erythematosus (SLE). Also, some SLE patients have increased levels of BAFF in serum. Therefore, it has been proposed that abnormally high levels of BAFF may contribute to the pathogenesis of autoimmune diseases by enhancing the survival of autoreactive B cells. The protein encoded by this gene is a receptor for BAFF and is a type III transmembrane protein containing a single extracellular cysteine-rich domain. It is thought that this receptor is the principal receptor required for BAFF-mediated mature B-cell survival.	
Source	
Escherichia Coli.	
Physical Appearance	
Sterile Filtered White lyophilized (freeze-dried) powder.	
Formulation	
Lyophilized from a 0.2 µm filtered concentrated (1.0mg/ml) solution in 20mM PB, pH 8.0, 500mM NaCl.	
Stability	
Lyophilized BAFF-R although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution B Lymphocyte Stimulator Receptor should be stored at 4°C between 2-7 days and for future use below -18°C. Please prevent freeze-thaw cycles.	
Purity	
Greater than 95.0% as determined by: (a) Analysis by RP-HPLC. (b) Analysis by SDS-PAGE.	
Amino acid sequence	
MRRGPRSLRGRDAPAPTPCVPAECFDLLVRHCVACGLLRTPRPKPAG ASSPAPRTALQPQESVGAGAGEAALPLPG.	

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Biological Activity

Determined by its ability to block BAFF induced mouse splenocyte survival. The expected ED 50 for this effect is 1.0-5.0 μg/ml in the presence of 1.0 μg/ml of human soluble BAFF.

Solubility

It is recommended to reconstitute the lyophilized B Lymphocyte Stimulator Receptor Recombinant in sterile 18MΩ-cm H2O not less than 100 μg/ml, which can then be further diluted to other aqueous solutions.

Background

B-cell Activating Factor Receptor Human Recombinant: Unlocking the Potential of a Key Immunomodulatory Target Abstract: B-cell Activating Factor Receptor (BAFF-R) human recombinant is a critical component of the B-cell immune response, playing a pivotal role in B-cell survival, maturation, and antibody production. This research paper provides a comprehensive analysis of BAFF-R, including its characteristics, signaling pathways, and potential therapeutic applications. Furthermore, innovative methodologies for the production and optimization of BAFF-R human recombinant are proposed, shedding light on its future implications in the field of immunotherapy. Introduction: The immune system relies on the precise regulation of B-cell functions, with BAFF-R serving as a key modulator of B-cell development and activation. This paper explores the unique features of BAFF-R and presents novel approaches for its production and optimization, aiming to uncover its therapeutic potential. Characteristics and Signaling Pathways: BAFF-R is a type III transmembrane protein expressed primarily on B-cells. It belongs to the tumor necrosis factor receptor superfamily and binds specifically to B-cell activating factor (BAFF). Engagement of BAFF-R by BAFF initiates intracellular signaling cascades, including the activation of nuclear factor-kappa B (NF-κB) and mitogen-activated protein kinase (MAPK) pathways, promoting B-cell survival, proliferation, and differentiation. Production of BAFF-R Human Recombinant: Efficient production methodologies are crucial for the therapeutic application of BAFF-R human recombinant. Various expression systems, such as mammalian cell-based platforms, have been explored to ensure proper folding and post-translational modifications of the protein. Optimization strategies, including codon optimization and vector design, have been employed to enhance production efficiency. Purification techniques, such as affinity chromatography and size exclusion chromatography, have been optimized to isolate high-quality BAFF-R recombinant. Potential Therapeutic Applications: BAFF-R human recombinant holds great promise in the field of immunotherapy. Dysregulation of the BAFF/BAFF-R signaling axis has been implicated in autoimmune diseases, such as systemic lupus erythematosus and rheumatoid arthritis. Thus, modulating BAFF-R activity using BAFF-R human recombinant may provide a targeted therapeutic approach for these conditions. Additionally, BAFF-R represents a potential target for B-cell malignancies, and BAFF-R human recombinant may serve as an adjuvant therapy in combination with existing treatments. Conclusion: BAFF-R human recombinant represents a crucial immunomodulatory target with diverse therapeutic applications in immunotherapy. Optimizing production methodologies and further understanding its signaling pathways will enhance its clinical utility. With its potential implications in autoimmune diseases and B-cell malignancies, BAFF-R human recombinant holds immense promise as an innovative therapeutic tool for immune-related disorders.

References

Bibliography: Mackay F, Browning JL. BAFF/BAFF-R signaling in B-cell homeostasis and autoimmune disease. Curr Opin Immunol. 2002;14(3):266-275. Bossen C, Schneider P. BAFF, APRIL and their receptors: structure, function and signaling. Semin Immunol. 2006;18(5):263-275. Hahne M, Kataoka T, Schroter M, et al. APRIL, a new ligand

Precautions

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

Target Information: (Q96RJ3)

Background

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potential target for B-cell malignancies, and BAFF-R human recombinant may serve as an adjuvant therapy in combination with existing treatments. Conclusion: BAFF-R human recombinant represents a crucial immunomodulatory target with diverse therapeutic applications in immunotherapy. Optimizing production methodologies and further understanding its signaling pathways will enhance its clinical utility. With its potential implications in autoimmune diseases and B-cell malignancies, BAFF-R human recombinant holds immense promise as an innovative therapeutic tool for immune-related disorders.

References for protein:

Bibliography: Mackay F, Browning JL. BAFF/BAFF-R signaling in B-cell homeostasis and autoimmune disease. Curr Opin Immunol. 2002;14(3):266-275. Bossen C, Schneider P. BAFF, APRIL and their receptors: structure, function and signaling. Semin Immunol. 2006;18(5):263-275. Hahne M, Kataoka T, Schroter M, et al. APRIL, a new ligand