

TNFA Rat, His Active

Tumor Necrosis Factor-alpha Rat Recombinant, His Tag Active

CYK0564

Product Overview

Name	TNFA Rat, His Active
Accession(Primary)	P16599
Description	Tumor Necrosis Factor-alpha Rat Recombinant, His Tag Active

Target information (P16599)

Gene Name

About Gene Symbol

Background

Tumor Necrosis Factor-alpha Rat Recombinant, His Tag Active: An In-Depth Analysis Abstract: Tumor Necrosis Factor-alpha (TNF- α) is a cytokine that plays a significant role in various physiological and pathological processes. This human research paper provides an in-depth analysis of TNF- α Rat Recombinant with a His Tag, focusing on its structure, signaling pathways, and diverse functions. Additionally, the paper explores the potential applications of TNF- α Rat Recombinant in human research. Introduction: TNF- α is a key mediator of inflammation and immune responses in humans. This research paper aims to provide a comprehensive analysis of TNF- α Rat Recombinant with a His Tag, highlighting its significance in human physiology and its potential applications in human research. Structure and Function of TNF- α : TNF- α is a homotrimeric protein that binds to two distinct receptors, TNFR1 and TNFR2, initiating downstream signaling cascades. It regulates immune cell activation, cytokine production, and cellular responses, influencing diverse biological processes. Signaling Pathways: Upon binding to its receptors, TNF- α activates various signaling pathways, including the NF- κ B pathway, MAPK pathway, and cell death pathways. These pathways regulate gene expression and

mediate cellular responses, impacting inflammation, apoptosis, and tissue homeostasis. Functions of TNF- α : TNF- α plays a crucial role in immune responses, inflammation, and tissue homeostasis. It regulates the activation and migration of immune cells, promotes cytokine production, and modulates cell survival and death. Dysregulation of TNF- α is implicated in the pathogenesis of various human diseases, making it an attractive target for research and therapeutic interventions. Applications in Human Research: TNF- α Rat Recombinant with a His Tag has diverse applications in human research. It can be used to investigate TNF- α signaling pathways, study its effects on immune cell functions, and explore its role in disease pathogenesis. Additionally, this recombinant protein can be utilized for in vitro and in vivo studies aimed at developing novel therapeutic strategies. Future Directions : Further research is necessary to unravel the intricate mechanisms of TNF- α signaling and its contributions to human diseases. Continued investigations will enable the development of targeted therapies and personalized medicine approaches. Future studies should also focus on optimizing the use of TNF- α Rat Recombinant in preclinical and clinical research settings.

References for protein:

Bibliography: Aggarwal, B. B. (2003). Signalling pathways of the TNF superfamily: A double-edged sword. *Nature Reviews Immunology*, 3(9), 745-756. Tracey, D., et al. (2008). Anti-TNF therapy: Past, present, and future. *EXS*, 102, 105-117. Feldmann, M., et al. (2018). Biological insights from clinical trials with anti-TNF therapy. *Seminars in Immunology*, 28(2), 139-147. Kalliolias, G. D., & Ivashkiv, L. B. (2016). TNF biology, pathogenic mechanisms, and emerging therapeutic strategies. *Nature Reviews Rheumatology*, 12(1), 49-62. McInnes, I. B., & Schett, G. (2011). Cytokines in the pathogenesis of rheumatoid arthritis. *Nature Reviews Immunology*, 7(6), 429-442.