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

AIF1 Human

Allograft Inflammatory Factor 1 Human Recombinant
CYK0022

Product Overview

Name	AIF1 Human
Description	
Allograft Inflammatory Factor 1 Human Recombinant	
Accession (Primary)	P55008
Synonyms	
AIF-1, Allograft inflammatory factor 1, Em:AF129756.17, G1, IBA1, Ionized calcium-binding adapter molecule 1, IRT-1, Protein G1, AIF1.	
Introduction	
Human AIF1 protein shares 98% homology/identity with that of rat. AIF1 is expressed in macrophages and neutrophils. The expression of AIF1 transcripts is upregulated by IFN-g in rat macrophages. AIF1 is expressed selectively in human macrophage-like cell lines, and in a subset of CD68(+) macrophages in the interstitial and perivascular spaces of human heart allografts. In quiescent cultured human vascular smooth muscle cells synthesis of AIF1 is induced by IFN-g, IL1b, and conditioned medium of T-cells. Overexpression of AIF1 in human VSMCs results in enhanced growth of these cells. AIF1 is expressed during apoptosis rat mammary gland and ventral prostate tissues. Allograft Inflammatory Factor 1 is expressed by several tumor-associated activated macrophages and microglial cells in rat and human gliomas. There is an evident relationship of AIF1-expressing activated macrophages and microglial cells with tumor malignancy in humans.	
Source	
E. Coli.	
Formulation	
The AIF1 protein solution (0.5mg/1ml) is formulated in 20mM Tris-HCl buffer (pH8.0) 2mM DTT, 200mM NaCl and 20% glycerol.	
Stability	
Store AIF1 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 95% as determined by SDS PAGE.	
Amino acid sequence	

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

MGSSHHHHHH SSGLVPRGSH MSQTRDLQGG KAFGLLKAQQ EERLDEINKQ FLDDPKYSSD EDLPSKLEGF KEKYMEFDLN GNGDIDIMSL KRMLEKLGVP KTHLELKKLI GEVSSGSGET FSYPDFLRMM LGKRSAILKM ILMYEEKARE KEKPTGPPAK KAISELP.

Background

Allograft Inflammatory Factor 1 Human Recombinant: Uncovering its Role in Immune Responses and Therapeutic Prospects 1. Abstract This paper explores the Allograft Inflammatory Factor 1 Human Recombinant (AIF-1), a cytoplasmic, IFN-gamma-inducible calcium-binding protein involved in inflammation and immunity. We review the structure, biological roles, and involvement of AIF-1 in disease pathology. The therapeutic potential of AIF-1 in immune-related disorders is also explored. 2. Introduction AIF-1, also known as IBA1, plays an important role in immune responses. It is associated with various immune cells, particularly macrophages, and has been implicated in numerous inflammatory and immune-related diseases. Understanding the function of AIF-1 could aid the development of novel therapeutic strategies. 3. Structure and Signaling of AIF-1 AIF-1 is a small 17 kDa protein with an EF-hand calcium-binding motif. Although the precise mechanism by which AIF-1 exerts its functions is not entirely clear, it is known to regulate the activation, migration, and proliferation of macrophages, key cells involved in immune responses. 4. Biological Functions of AIF-1 AIF-1 has been shown to play key roles in macrophage activation and function, which are central to inflammation and immunity. It is also implicated in cell survival, proliferation, and differentiation. 5. AIF-1 in Disease Pathology AIF-1 has been associated with a range of inflammatory and immune-related diseases, including rheumatoid arthritis, atherosclerosis, and multiple sclerosis. It is also implicated in several cancers, further underscoring its broad physiological and pathological relevance. 6. Therapeutic Potential of AIF-1 Given its pivotal role in immune responses, AIF-1 presents an intriguing target for therapeutic interventions in immune-related diseases. Modulating the activity of AIF-1 could potentially alleviate pathological inflammation and autoimmunity. 7. Conclusion and Future Perspectives Our knowledge of AIF-1 and its functions has significantly improved in recent years, but much remains to be discovered. Further research into AIF-1's exact molecular mechanisms and roles in disease will undoubtedly contribute to the development of novel therapeutic strategies.

Precautions

AIF1 Human is for research use only and not for use in diagnostic or therapeutic procedures.

Target Information: (P55008)

Background

Allograft Inflammatory Factor 1 Human Recombinant: Uncovering its Role in Immune Responses and Therapeutic

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

Prospects 1. Abstract This paper explores the Allograft Inflammatory Factor 1 Human Recombinant (AIF-1), a cytoplasmic, IFN-gamma-inducible calcium-binding protein involved in inflammation and immunity. We review the structure, biological roles, and involvement of AIF-1 in disease pathology. The therapeutic potential of AIF-1 in immune-related disorders is also explored. 2. Introduction AIF-1, also known as IBA1, plays an important role in immune responses. It is associated with various immune cells, particularly macrophages, and has been implicated in numerous inflammatory and immune-related diseases. Understanding the function of AIF-1 could aid the development of novel therapeutic strategies. 3. Structure and Signaling of AIF-1 AIF-1 is a small 17 kDa protein with an EF-hand calcium-binding motif. Although the precise mechanism by which AIF-1 exerts its functions is not entirely clear, it is known to regulate the activation, migration, and proliferation of macrophages, key cells involved in immune responses. 4. Biological Functions of AIF-1 AIF-1 has been shown to play key roles in macrophage activation and function, which are central to inflammation and immunity. It is also implicated in cell survival, proliferation, and differentiation. 5. AIF-1 in Disease Pathology AIF-1 has been associated with a range of inflammatory and immune-related diseases, including rheumatoid arthritis, atherosclerosis, and multiple sclerosis. It is also implicated in several cancers, further underscoring its broad physiological and pathological relevance. 6. Therapeutic Potential of AIF-1 Given its pivotal role in immune responses, AIF-1 presents an intriguing target for therapeutic interventions in immune-related diseases. Modulating the activity of AIF-1 could potentially alleviate pathological inflammation and autoimmunity. 7. Conclusion and Future Perspectives Our knowledge of AIF-1 and its functions has significantly improved in recent years, but much remains to be discovered. Further research into AIF-1's exact molecular mechanisms and roles in disease will undoubtedly contribute to the development of novel therapeutic strategies.