Recombinant Human ITCH/AIP4 Protein (aa 526-903)

Catalog Number: PKSH031249



Note: Centrifuge before opening to ensure complete recovery of vial contents.

Description

Synonyms ADMFD;AIF4;AIP4;dJ468O1.1;NAPP1

Species Human
Expression Host E.coli

 Sequence
 Arg 526-Glu 903

 Accession
 NP_113671.3

Calculated Molecular Weight 40 kDa
Observed molecular weight 40 kDa
Tag None

Properties

Purity > 98 % as determined by reducing SDS-PAGE.

Endotoxin Please contact us for more information.

Storage Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to

-80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots

of reconstituted samples are stable at < -20°C for 3 months.

Shipping This product is provided as lyophilized powder which is shipped with ice packs.

Formulation Lyophilized from sterile 20mM Tris, 200mM NaCl, 10% glycerol, pH 8.0

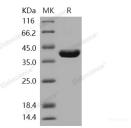
Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as

protectants before lyophilization.

Please refer to the specific buffer information in the printed manual.

Reconstitution Please refer to the printed manual for detailed information.

Data



> 98 % as determined by reducing SDS-PAGE.

Background

E3 ubiquitin-protein ligase Itchy homolog, also known as Atrophin-1-interacting protein 4, NFE2-associated polypeptide 1, NAPP1 and ITCH, is a cell membrane protein which contains oneC2 domain, oneHECT (E6AP-type E3 ubiquitin-protein ligase) domain and contains fourWW domains. ITCH acts as an E3 ubiquitin-protein ligase which accepts ubiquitin from an E2 ubiquitin-conjugating enzyme in the form of a thioester and then directly transfers the ubiquitin to targeted substrates. It catalyzes 'Lys-29'-, 'Lys-48'- and 'Lys-63'-linked ubiquitin conjugation. ITCH is involved in the control of inflammatory signaling pathways. It is an essential component of a ubiquitin-editing protein complex, comprising also TNFAIP3, TAX1BP1 and RNF11, that ensures the transient nature of inflammatory signaling pathways. ITCH promotes the association of the complex after TNF stimulation. Once the complex is formed, TNFAIP3

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deubiquitinates 'Lys-63' polyubiquitin chains on RIPK1 and catalyzes the formation of 'Lys-48'-polyubiquitin chains. This leads to RIPK1 proteosomal degradation and consequently termination of the TNF- or LPS-mediated activation of NFKB1. Defects in ITCH are the cause of syndromic multisystem autoimmune disease (SMAD) which is characterized by organomegaly, failure to thrive, developmental delay, dysmorphic features and autoimmune inflammatory cell infiltration of the lungs, liver and gut.

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