ITCH (E3 Ubiquitin-protein Ligase Itchy Homolog, Itch, Atrophin-1-interacting Protein 4, AIP4, NFE2-associated Polypeptide 1, NAPP1, DJ46801.1) (AP)

Catalog number
128616-AP

Supplier
United States Biological

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. It is involved in the control of inflammatory signaling pathways. 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. Promotes the association of the complex after TNF stimulation. Once the complex is formed, TNFAIP3 deubiquitinates 'Lys-63' polyubiquitin chains on RIPK1 and catalyzes the formation of 'Lys-48'-polyubiquitin chains. This leads to RIPK1 proteasomal degradation and consequently termination of the TNF- or LPS-mediated activation of NFKB1. Ubiquinates RIPK2 by 'Lys-63'-linked conjugation and influences NOD2-dependent signal transduction pathways. Regulates the transcriptional activity of several transcription factors, and probably plays an important role in the regulation of immune response. Ubiquinates NFE2 by 'Lys-63' linkages and is implicated in the control of the development of hematopoietic lineages. Critical regulator of T-helper (TH2) cytokine development through its ability to induce JUNB ubiquitination and degradation. Ubiquinates SNX9. Ubiquinates CXCR4 and HGS/HRS and regulates sorting of CXCR4 to the degradative pathway. It is involved in the negative regulation of MAVS-dependent cellular antiviral responses. Ubiquinates MAVS through 'Lys-48'-linked conjugation resulting in MAVS proteasomal degradation. Involved in the regulation of apoptosis and reactive oxygen species levels through the ubiquitination and proteasomal degradation of TXNIP. Mediates the antiapoptotic activity of epidermal growth factor through the ubiquitination and proteasomal degradation of p15 BID. Targets DTX1 for lysosomal degradation and controls NOTCH1 degradation, in the absence of ligand, through 'Lys-29'-linked polyubiquitination.

Applications
Suitable for use in and ELISA. Other applications not tested.

Recommended Dilution
10ug/ml
Optimal dilutions to be determined by the researcher.

AA Sequence
DVLLGTAALDIYETLKSNNMKLEEVVTLQLGGDKPETETIGDLSICLDGQLESEVVNTGETCSESASQNDGSR
SKDETRVSTNGSDDPEDAGAGE

Storage and Stability
Store product at 4°C. DO NOT FREEZE! Stable at 4°C for 12 months after receipt as an undiluted liquid. Dilute required amount only prior to immediate use. Further dilutions can be made in assay buffer. For maximum recovery of product, centrifuge the original vial prior to removing the cap.
Note
Applications are based on unconjugated antibody.

Immunogen
Partial recombinant corresponding to aa92-191 from human ITCH (NP_113671) with GST tag. MW of the GST tag alone is 26kD.

Formulation
Supplied as a liquid in PBS, pH 7.2. No preservative added. Labeled with Alkaline Phophatase (AP).

Purity
Purified by Protein A affinity chromatography.

Specificity
Recognizes human ITCH.

Product Type
Mab

Source
human

Isotype
IgG2b,k

Grade
Affinity Purified

Applications
E

Crossreactivity
Hu

Storage
4°C Do Not Freeze

Detection Method
AP

Conjugate
x