

Anti-ITCH Rabbit Monoclonal Antibody
Catalog # ABO15820**Specification**

Anti-ITCH Rabbit Monoclonal Antibody - Product Information

Application	WB, IHC
Primary Accession	Q96J02
Host	Rabbit
Isotype	IgG
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Format	Liquid

Description

Anti-ITCH Rabbit Monoclonal Antibody . Tested in WB, IHC applications. This antibody reacts with Human, Mouse, Rat.

Anti-ITCH Rabbit Monoclonal Antibody - Additional Information

Gene ID 83737

Other Names

E3 ubiquitin-protein ligase Itchy homolog, Itch, 2.3.2.26, Atrophin-1-interacting protein 4, AIP4, HECT-type E3 ubiquitin transferase Itchy homolog, NFE2-associated polypeptide 1, NAPP1, ITCH

Calculated MW

103 kDa KDa

Application Details

WB 1:1000-1:5000
IHC 1:100-1:500

Contents

Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.

Immunogen

A synthesized peptide derived from human ITCH

Purification

Affinity-chromatography

Storage

Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.

Anti-ITCH Rabbit Monoclonal Antibody - Protein Information

Name ITCH

Function

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 (PubMed:[>11046148, PubMed:\[>14602072, PubMed:\\[>15051726, PubMed:\\\[>16387660, PubMed:\\\\[>17028573, PubMed:\\\\\[>18718448, PubMed:\\\\\\[>18718449, PubMed:\\\\\\\[>19116316, PubMed:\\\\\\\\[>19592251, PubMed:\\\\\\\\\[>19881509, PubMed:\\\\\\\\\\[>20068034, PubMed:\\\\\\\\\\\[>20392206, PubMed:\\\\\\\\\\\\[>20491914, PubMed:\\\\\\\\\\\\\[>23146885, PubMed:\\\\\\\\\\\\\\[>24790097, PubMed:\\\\\\\\\\\\\\\[>25631046\\\\\\\\\\\\\\\\). Catalyzes 'Lys-29', 'Lys-48' and 'Lys-63'-linked ubiquitin conjugation \\\\\\\\\\\\\\\\(PubMed:\\\\\\\\\\\\\\\\[>17028573, PubMed:\\\\\\\\\\\\\\\\\[>18718448, PubMed:\\\\\\\\\\\\\\\\\\[>19131965, PubMed:\\\\\\\\\\\\\\\\\\\[>19881509\\\\\\\\\\\\\\\\\\\\). Involved in the control of inflammatory signaling pathways \\\\\\\\\\\\\\\\\\\\(PubMed:\\\\\\\\\\\\\\\\\\\\[>19131965\\\\\\\\\\\\\\\\\\\\\). Essential component of a ubiquitin-editing protein complex, comprising also TNFAIP3, TAX1BP1 and RNF11, that ensures the transient nature of inflammatory signaling pathways \\\\\\\\\\\\\\\\\\\\\(PubMed:\\\\\\\\\\\\\\\\\\\\\[>19131965\\\\\\\\\\\\\\\\\\\\\\). Promotes the association of the complex after TNF stimulation \\\\\\\\\\\\\\\\\\\\\\(PubMed:\\\\\\\\\\\\\\\\\\\\\\[>19131965\\\\\\\\\\\\\\\\\\\\\\\). Once the complex is formed, TNFAIP3 deubiquitinates 'Lys-63' polyubiquitin chains on RIPK1 and catalyzes the formation of 'Lys-48'-polyubiquitin chains \\\\\\\\\\\\\\\\\\\\\\\(PubMed:\\\\\\\\\\\\\\\\\\\\\\\[>19131965\\\\\\\\\\\\\\\\\\\\\\\\). This leads to RIPK1 proteasomal degradation and consequently termination of the TNF- or LPS-mediated activation of NFkB1 \\\\\\\\\\\\\\\\\\\\\\\\(PubMed:\\\\\\\\\\\\\\\\\\\\\\\\[>19131965\\\\\\\\\\\\\\\\\\\\\\\\\). Ubiquitinates RIPK2 by 'Lys-63'-linked conjugation and influences NOD2-dependent signal transduction pathways \\\\\\\\\\\\\\\\\\\\\\\\\(PubMed:\\\\\\\\\\\\\\\\\\\\\\\\\[>19592251\\\\\\\\\\\\\\\\\\\\\\\\\\). Regulates the transcriptional activity of several transcription factors, and probably plays an important role in the regulation of immune response \\\\\\\\\\\\\\\\\\\\\\\\\\(PubMed:\\\\\\\\\\\\\\\\\\\\\\\\\\[>18718448, PubMed:\\\\\\\\\\\\\\\\\\\\\\\\\\\[>20491914\\\\\\\\\\\\\\\\\\\\\\\\\\\\). Ubiquitinates NFE2 by 'Lys-63' linkages and is implicated in the control of the development of hematopoietic lineages \\\\\\\\\\\\\\\\\\\\\\\\\\\\(PubMed:\\\\\\\\\\\\\\\\\\\\\\\\\\\\[>18718448\\\\\\\\\\\\\\\\\\\\\\\\\\\\\). Mediates JUN ubiquitination and degradation \\\\\\\\\\\\\\\\\\\\\\\\\\\\\(By similarity\\\\\\\\\\\\\\\\\\\\\\\\\\\\\). Mediates JUNB ubiquitination and degradation \\\\\\\\\\\\\\\\\\\\\\\\\\\\\(PubMed:\\\\\\\\\\\\\\\\\\\\\\\\\\\\\[>16387660\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\). Critical regulator of type 2 helper T \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\(Th2\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\) cell cytokine production by inducing JUNB ubiquitination and degradation \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\(By similarity\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\). Involved in the negative regulation of MAVS-dependent cellular antiviral responses \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\(PubMed:\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\[>19881509\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\). Ubiquitinates MAVS through 'Lys-48'-linked conjugation resulting in MAVS proteasomal degradation \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\(PubMed:\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\[>19881509\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\). Following ligand stimulation, regulates sorting of Wnt receptor FZD4 to the degradative endocytic pathway probably by modulating PI42KA activity \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\(PubMed:\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\[>23146885\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\). Ubiquitinates PI4K2A and negatively regulates its catalytic activity \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\(PubMed:\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\[>23146885\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\).\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\]\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\(http://www.uniprot.org/citations/23146885\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\)\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\]\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\(http://www.uniprot.org/citations/23146885\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\)\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\]\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\(http://www.uniprot.org/citations/19881509\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\)\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\]\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\(http://www.uniprot.org/citations/19881509\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\)\\\\\\\\\\\\\\\\\\\\\\\\\\\\\]\\\\\\\\\\\\\\\\\\\\\\\\\\\\\(http://www.uniprot.org/citations/16387660\\\\\\\\\\\\\\\\\\\\\\\\\\\\\)\\\\\\\\\\\\\\\\\\\\\\\\\\\\]\\\\\\\\\\\\\\\\\\\\\\\\\\\\(http://www.uniprot.org/citations/18718448\\\\\\\\\\\\\\\\\\\\\\\\\\\\)\\\\\\\\\\\\\\\\\\\\\\\\\\\]\\\\\\\\\\\\\\\\\\\\\\\\\\\(http://www.uniprot.org/citations/20491914\\\\\\\\\\\\\\\\\\\\\\\\\\\)\\\\\\\\\\\\\\\\\\\\\\\\\\]\\\\\\\\\\\\\\\\\\\\\\\\\\(http://www.uniprot.org/citations/18718448\\\\\\\\\\\\\\\\\\\\\\\\\\)\\\\\\\\\\\\\\\\\\\\\\\\\]\\\\\\\\\\\\\\\\\\\\\\\\\(http://www.uniprot.org/citations/19592251\\\\\\\\\\\\\\\\\\\\\\\\\)\\\\\\\\\\\\\\\\\\\\\\\\]\\\\\\\\\\\\\\\\\\\\\\\\(http://www.uniprot.org/citations/19131965\\\\\\\\\\\\\\\\\\\\\\\\)\\\\\\\\\\\\\\\\\\\\\\\]\\\\\\\\\\\\\\\\\\\\\\\(http://www.uniprot.org/citations/19131965\\\\\\\\\\\\\\\\\\\\\\\)\\\\\\\\\\\\\\\\\\\\\\]\\\\\\\\\\\\\\\\\\\\\\(http://www.uniprot.org/citations/19131965\\\\\\\\\\\\\\\\\\\\\\)\\\\\\\\\\\\\\\\\\\\\]\\\\\\\\\\\\\\\\\\\\\(http://www.uniprot.org/citations/19131965\\\\\\\\\\\\\\\\\\\\\)\\\\\\\\\\\\\\\\\\\\]\\\\\\\\\\\\\\\\\\\\(http://www.uniprot.org/citations/19131965\\\\\\\\\\\\\\\\\\\\)\\\\\\\\\\\\\\\\\\\]\\\\\\\\\\\\\\\\\\\(http://www.uniprot.org/citations/19881509\\\\\\\\\\\\\\\\\\\)\\\\\\\\\\\\\\\\\\]\\\\\\\\\\\\\\\\\\(http://www.uniprot.org/citations/19131965\\\\\\\\\\\\\\\\\\)\\\\\\\\\\\\\\\\\]\\\\\\\\\\\\\\\\\(http://www.uniprot.org/citations/18718448\\\\\\\\\\\\\\\\\)\\\\\\\\\\\\\\\\]\\\\\\\\\\\\\\\\(http://www.uniprot.org/citations/17028573\\\\\\\\\\\\\\\\)\\\\\\\\\\\\\\\]\\\\\\\\\\\\\\\(http://www.uniprot.org/citations/25631046\\\\\\\\\\\\\\\)\\\\\\\\\\\\\\]\\\\\\\\\\\\\\(http://www.uniprot.org/citations/24790097\\\\\\\\\\\\\\)\\\\\\\\\\\\\]\\\\\\\\\\\\\(http://www.uniprot.org/citations/23146885\\\\\\\\\\\\\)\\\\\\\\\\\\]\\\\\\\\\\\\(http://www.uniprot.org/citations/20491914\\\\\\\\\\\\)\\\\\\\\\\\]\\\\\\\\\\\(http://www.uniprot.org/citations/20392206\\\\\\\\\\\)\\\\\\\\\\]\\\\\\\\\\(http://www.uniprot.org/citations/20068034\\\\\\\\\\)\\\\\\\\\]\\\\\\\\\(http://www.uniprot.org/citations/19881509\\\\\\\\\)\\\\\\\\]\\\\\\\\(http://www.uniprot.org/citations/19592251\\\\\\\\)\\\\\\\]\\\\\\\(http://www.uniprot.org/citations/19116316\\\\\\\)\\\\\\]\\\\\\(http://www.uniprot.org/citations/18718449\\\\\\)\\\\\]\\\\\(http://www.uniprot.org/citations/18718448\\\\\)\\\\]\\\\(http://www.uniprot.org/citations/17028573\\\\)\\\]\\\(http://www.uniprot.org/citations/16387660\\\)\\]\\(http://www.uniprot.org/citations/15051726\\)\]\(http://www.uniprot.org/citations/14602072\)](http://www.uniprot.org/citations/11046148)

href="http://www.uniprot.org/citations/23146885" target="_blank">23146885). Ubiquitinates chemokine receptor CXCR4 and regulates sorting of CXCR4 to the degradative endocytic pathway following ligand stimulation by ubiquitinating endosomal sorting complex required for transport ESCRT-0 components HGS and STAM (PubMed:14602072, PubMed:23146885, PubMed:34927784). Targets DTX1 for lysosomal degradation and controls NOTCH1 degradation, in the absence of ligand, through 'Lys-29'-linked polyubiquitination (PubMed:17028573, PubMed:18628966, PubMed:23886940). Ubiquitinates SNX9 (PubMed:20491914). Ubiquitinates MAP3K7 through 'Lys-48'-linked conjugation (By similarity). Together with UBR5, involved in the regulation of apoptosis and reactive oxygen species levels through the ubiquitination and proteasomal degradation of TXNIP: catalyzes 'Lys-48'-'Lys-63'-branched ubiquitination of TXNIP (PubMed:20068034, PubMed:29378950). ITCH synthesizes 'Lys-63'-linked chains, while UBR5 is branching multiple 'Lys-48'-linked chains of substrate initially modified (PubMed:29378950). Mediates the antiapoptotic activity of epidermal growth factor through the ubiquitination and proteasomal degradation of p15 BID (PubMed:20392206). Ubiquitinates BRAT1 and this ubiquitination is enhanced in the presence of NDFIP1 (PubMed:25631046). Inhibits the replication of influenza A virus (IAV) via ubiquitination of IAV matrix protein 1 (M1) through 'Lys-48'-linked conjugation resulting in M1 proteasomal degradation (PubMed:30328013). Ubiquitinates NEDD9/HEF1, resulting in proteasomal degradation of NEDD9/HEF1 (PubMed:15051726).

Cellular Location

Cell membrane; Peripheral membrane protein; Cytoplasmic side. Cytoplasm. Nucleus Early endosome membrane; Peripheral membrane protein; Cytoplasmic side. Endosome membrane; Peripheral membrane protein; Cytoplasmic side. Note=May be recruited to exosomes by NDFIP1 (PubMed:18819914). Localizes to plasma membrane upon CXCL12 stimulation where it co-localizes with CXCL4 (PubMed:14602072) Localization to early endosomes is increased upon CXCL12 stimulation where it co-localizes with DTX3L and CXCL4 (PubMed:24790097)

Tissue Location

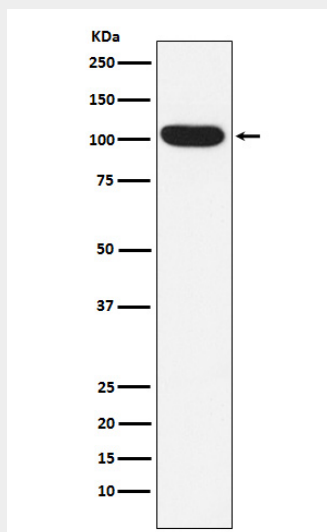
Widely expressed.

Anti-ITCH Rabbit Monoclonal Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

Anti-ITCH Rabbit Monoclonal Antibody - Images



Western blot analysis of ITCH/AIP4 expression in K562 cell lysate.