

ITCH Antibody (Center)
Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP13626C

Specification

ITCH Antibody (Center) - Product Information

Application	WB,E
Primary Accession	O96J02
Other Accession	O8C863 , NP_113671.3
Reactivity	Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	102803
Antigen Region	509-536

ITCH Antibody (Center) - Additional Information

Gene ID 83737

Other Names

E3 ubiquitin-protein ligase Itchy homolog, Itch, 632-, Atrophin-1-interacting protein 4, AIP4, NFE2-associated polypeptide 1, NAPP1, ITCH

Target/Specificity

This ITCH antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 509-536 amino acids from the Central region of human ITCH.

Dilution

WB~~1:1000

Format

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

Storage

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

ITCH Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

ITCH Antibody (Center) - 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:[14602072](#), PubMed:[17028573](#), PubMed:[16387660](#), PubMed:[18718448](#), PubMed:[18718449](#), PubMed:[11046148](#), PubMed:[19592251](#), PubMed:[19116316](#), PubMed:[19881509](#), PubMed:[20491914](#), PubMed:[20392206](#), PubMed:[20068034](#), PubMed:[23146885](#), PubMed:[24790097](#), PubMed:[25631046](#), PubMed:[15051726](#)). 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](#)). 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). Involved in the regulation of apoptosis and reactive oxygen species levels through the ubiquitination and proteasomal degradation of TXNIP (PubMed:[20068034](#)). 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

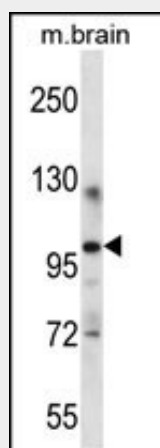
Widely expressed.

ITCH Antibody (Center) - 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](#)

ITCH Antibody (Center) - Images



ITCH Antibody (Center) (Cat. #AP13626c) western blot analysis in mouse brain tissue lysates (35ug/lane). This demonstrates the ITCH antibody detected the ITCH protein (arrow).

ITCH Antibody (Center) - Background

Atrophin-1 contains a polyglutamine repeat, expansion of which is responsible for dentatorubral and pallidoluysian atrophy. The protein encoded by this gene interacts with atrophin-1. This encoded protein is a closely related member of the NEDD4-like protein family. This family of proteins are E3 ubiquitin-ligase molecules and regulate key trafficking decisions, including targeting of proteins to proteosomes or lysosomes. This encoded protein contains four tandem WW domains and a HECT (homologous to the E6-associated protein carboxyl terminus) domain. It can act as a transcriptional corepressor of p45/NFE2 and may participate in the regulation of immune responses by modifying Notch-mediated signaling. It is highly similar to the mouse Itch protein, which has been implicated in the regulation and differentiation of erythroid and lymphoid cells.

ITCH Antibody (Center) - References

Yang, F., et al. Cell Death Differ. 17(8):1354-1367(2010)
Baumann, C., et al. FEBS J. 277(13):2803-2814(2010)
Venuprasad, K. Cancer Res. 70(8):3009-3012(2010)
Lohr, N.J., et al. Am. J. Hum. Genet. 86(3):447-453(2010)
Ushijima, Y., et al. Virol. J. 7, 179 (2010) :