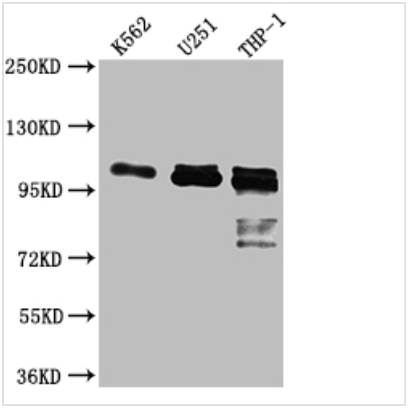
ITCH Antibody

Product Code	CSB-RA587302A0HU
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	Q96J02
Immunogen	A synthesized peptide derived from human ITCH
Species Reactivity	Human
Tested Applications	ELISA, WB; Recommended dilution: WB:1:500-1:5000
Relevance	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. Ubiquitinates 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. Ubiquitinates 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 (By similarity). Ubiquitinates SNX9. Ubiquitinates 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. Ubiquitinates MAVS through 'Lys-48'-linked conjugation resulting in MAVS proteasomal degradation. 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. 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. Ubiquitinates BRAT1 and this ubiquitination is enhanced in the presence of NDFIP1 (PubMed:25631046).
Form	Liquid
Conjugate	Non-conjugated
Storage Buffer	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Purification Method	Affinity-chromatography

Isotype	Rabbit IgG
Clonality	Monoclonal
Product Type	Recombinant Antibody
Immunogen Species	Homo sapiens (Human)
Research Area	Cell biology
Gene Names	ITCH
Accession NO.	9C3

Image



Western Blot
Positive WB detected in: K562 whole cell lysate, U-251 whole cell lysate, THP-1 whole cell lysate
All lanes: ITCH antibody at 1:1000
Secondary
Goat polyclonal to rabbit IgG at 1/50000 dilution
Predicted band size: 103, 99, 87 kDa
Observed band size: 103 kDa

Description

ITCH is an E3 ligase with a HECT domain that is important for Th2 cell development and the degradation of ubiquitin-proteasomal proteins. The WW domain identifies the Pro-rich PPXY consensus sequence in substrate proteins, while the HECT domain attaches ubiquitin molecules to substrates, causing substrate breakdown. Due to its functionally distinct substrates, it also plays crucial roles in a variety of biological situations, including DNA damage response, T-cell differentiation, the immunological response, and cell death. ITCH deficiency has been linked to severe autoimmune illness in mice. ITCH may also be implicated in TGF β signaling and contribute to the development of marrow fibrosis.

Genes for ITCH antibody's heavy and light chains were cloned into plasma vectors, which were subsequently transfected into mammalian cells for expression. The resulting product is the recombinant ITCH antibody. This recombinant ITCH antibody was subsequently purified from the culture medium of transfected host cell lines through A synthesized peptide derived from human ITCH. It has verified to detect ITCH protein Human in the ELISA, WB.