



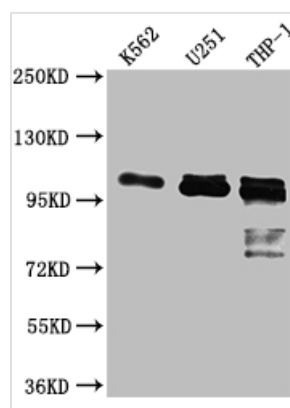
ITCH Recombinant Monoclonal Antibody

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	<p>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 NFκB1. 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).</p>
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
Clone 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

The ITCH recombinant monoclonal antibody is used to detect human ITCH protein in ELISA and WB applications and is produced using recombinant DNA technology. To generate this antibody, the gene encoding the ITCH monoclonal antibody is synthesized by sequencing the cDNA of the ITCH antibody-producing hybridomas. The hybridomas are produced by fusing myeloma cells with B cells isolated from an animal immunized with a synthesized peptide derived from human ITCH. The synthesized gene is then incorporated into a vector and transfected into cells for cultivation. The resulting ITCH recombinant monoclonal antibody is purified from the cell culture supernatant using affinity chromatography.

The ITCH protein plays an important role in regulating protein turnover and degradation by adding ubiquitin molecules to target proteins. ITCH specifically targets a wide range of proteins for degradation, including transcription factors, signaling molecules, and membrane receptors, by recognizing specific motifs or domains in these proteins and catalyzing the attachment of ubiquitin chains. ITCH can also act as a negative regulator of the immune response by promoting the degradation of proteins involved in the activation of T cells and cytokine signaling.