ITCH Antibody – Mouse Monoclonal

PRODUCT OVERVIEW

Product Name	ITCH, Monoclonal Antibody
Full Product Name	Anti-ITCH Antibody (FITC), Mouse Monoclonal
Product Gene Name	anti-ITCH antibody
Product Synonym Names	ITCH/AIP4 Antibody (FITC), Mouse MAb; itchy E3 ubiquitin protein ligase; Anti-ADMFD Antibody; Anti-AIF4 Antibody; Anti-AIP4 Antibody; Anti-dJ468O1.1 Antibody; Anti-NAPP1 Antibody
Clonality	Monoclonal
Isotype	Mouse IgG1
Clone Number	01
Host	Mouse
Species Reactivity	Human
Form/Format	Liquid; Aqueous solution containing 0.5% BSA and 0.09% sodium azide
Purity/Purification	Protein A
Concentration	10ul/Test, 0.1mg/ml (lot specific)
Specificity	Human ITCH/AIP4
Preparation and Storage	This antibody can be stored at 2-8 degree C for twelve months without detectable loss of activity. Protected from prolonged exposure to light. Do not freeze! Sodium azide is toxic to cells and should be disposed of properly. Flush with large volumes of water during disposal.
Molecular Weight	86,498 Da
Immunogen	Recombinant Human ITCH/AIP4 protein
Conjugation	FITC
Preparation	This antibody was produced from a hybridoma resulting from the fusion of a mouse myeloma with B cells obtained from a mouse immunized with purified, recombinant Human ITCH/AIP4 (rh ITCH/AIP4) and conjugated with FITC under optimum conditions, the unreacted FITC was removed.
Applications Tested/Suitable for anti-ITCH antibody	Flow Cytometry (FC/FACS/FCM)
Related Product Information for anti-ITCH antibody	E3 ubiquitin-protein ligase Itchy homolog, also known as Atrophin-1-interacting protein 4, NFE2-associated polypeptide 1, NAPP1, and ITCH, is a cell membrane protein that contains one C2 domain, one HECT (E6AP-type E3 ubiquitin-protein ligase) domain and contains four WW domains. ITCH 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. ITCH is involved in the control of inflammatory signaling pathways. It 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. ITCH 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. Defects in ITCH are the cause of the syndromic multisystem autoimmune disease (SMAD) which is characterized by organomegaly, failure to thrive, developmental delay, dysmorphic features, and autoimmune inflammatory cell infiltration of the lungs, liver, and gut.

Product References and Citations for anti-ITCH antibody	Marchese A. et al., 2003, Dev. Cell 5:709-22. Wang Y. et al., 2006, EMBO J. 25: 5058-70. Bhandari D. et al., 2009, Mol. Biol. Cell 20:1324-39. Edwards TL. et al., 2009, Biochem. J. 423:31-9. Zhang P. et al., 2010, J. Biol. Chem. 285:8869-79. Azakir B.A. et al., 2010, FEBS J. 277:1319-30.
Other Notes	Small volumes of anti-ITCH antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for ITCH purchase	MBS8104911 is an antibody targeting ITCH. Also known as Anti-ITCH Antibody (FITC), Mouse Monoclonal. Reactive in Human. Host: Mouse.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for ITCH. It may not necessarily be applicable to this product.

NCBI GI #	27477109
NCBI GeneID	83737
NCBI Accession #	NP_113671.3
UniProt Secondary Accession #	O43584; Q5QP37; Q5TEL0; Q96F66; Q9BY75; Q9H451; Q9H4U5; A6NEW4; B4E234; E1P5P3; F5H217
UniProt Related Accession #	Q96J02
GenBank Nucleotide #	NM_031483.6
NCBI Official Full Name	E3 ubiquitin-protein ligase Itchy homolog isoform 2
NCBI Official Synonym Full Names	itchy E3 ubiquitin protein ligase
NCBI Official Symbol	ITCH
NCBI Official Synonym Symbols	AIF4; AIP4; ADMFD; NAPP1
Protein Family	E3 ubiquitin-protein ligase
NCBI Protein Information	E3 ubiquitin-protein ligase Itchy homolog
NCBI Summary for ITCH	This gene encodes a member of the Nedd4 family of HECT domain E3 ubiquitin ligases. HECT domain E3 ubiquitin ligases transfer ubiquitin from E2 ubiquitin-conjugating enzymes to protein substrates, thus targeting specific proteins for lysosomal degradation. The encoded protein plays a role in multiple cellular processes including erythroid and lymphoid cell differentiation and the regulation of immune responses. Mutations in this gene are a cause of syndromic multisystem autoimmune disease. Alternatively spliced transcript variants encoding multiple isoforms have been observed for this gene. [provided by RefSeq, Mar 2012]
Research Articles on ITCH	**1.** catalytic activity of Itch toward different SH3 domain-containing proteins was similar, except for beta-PIX that was not readily ubiquitylated even though it could interact with an affinity comparable to those of other substrates tested
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