STUB1 Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	STUB1, Polyclonal Antibody
Full Product Name	STUB1 Conjugated Antibody
Product Gene Name	anti-STUB1 antibody
Product Synonym Names	STUB1; CHIP; HSPABP2; NY-CO-7; SDCCAG7
Clonality	Polyclonal
Host	Rabbit
Species Reactivity	Human, Mouse, Rat
Form/Format	0.01M Sodium Phosphate, 0.25M NaCl, pH 7.6, 5mg/ml Bovine Serum Albumin, 0.02% Sodium Azide
Specificity	The antibody detects endogenous level of total STUB1 protein.
Preparation and Storage	Store at 4 degree C for 6 months.
Molecular Weight	303
OMIM	gene 615768
3D Structure	ModBase 3D Structure for Q9UNE7
Immunogen	Recombinant protein of human STUB1.
Conjugation	Biotin AF350 AF405 AF488 AF555 AF594 AF647 AF680 AF750
Excitation Emission	AF350: 346nm/442nm
Applications Tested/Suitable for anti-STUB1 antibody	Most Applications
Application Notes for anti-STUB1 antibody	Suggested Dilution: AF350 conjugated: most applications: 1:50-1:250 AF405 conjugated: most applications: 1:50-1:250 AF488 conjugated: most applications: 1:50-1:250 AF555 conjugated: most applications: 1:50-1:250 AF594 conjugated: most applications: 1:50-1:250 AF647 conjugated: most applications: 1:50-1:250 AF680 conjugated: most applications: 1:50-1:250 AF750 conjugated: most applications: 1:50-1:250 Biotin conjugated: working with enzyme-conjugated streptavidin, most applications: 1:50-1:1000
Related Product Information for anti-STUB1 antibody	The carboxy terminus of Hsc70-interacting protein (CHIP, STUB1) is a co-chaperone protein and functional E3 ubiquitin ligase that links the polypeptide binding activity of Hsp70 to the ubiquitin proteasome system (1). Cytoplasmic CHIP protein contains three 34-amino acid TPR (tetratricopeptide repeat) domains at its amino terminus and a carboxy-terminal U-box domain. CHIP interacts with the molecular chaperones Hsc70-Hsp70 and Hsp90 through its TPR domain, while E3 ubiquitin ligase activity is confined to the U-box domain (2, 3). The binding of CHIP to Hsp70 can stall the folding of Hsp70 client proteins and concomitantly facilitate the U-box dependent ubiquitination of Hsp70-bound substrates (4-6). CHIP appears to play a central role in cell stress protection (7) and is responsible for the degradation of disease-related proteins that include cystic fibrosis transmembrane conductance regulator (4), p53 (8), huntingtin and Ataxin-3 (9), Tau protein (10), and alpha-synuclein (11).
Other Notes	Small volumes of anti-STUB1 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 STUB1 purchase	MBS9443346 is an antibody targeting STUB1. Also known as STUB1 Conjugated Antibody. Reactive in Human, Mouse, Rat. Host: Rabbit.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for STUB1. It may not necessarily be applicable to this product.

NCBI GI #	78099173
NCBI GeneID	10273
NCBI Accession #	Q9UNE7.2
UniProt Primary Accession #	Q9UNE7
UniProt Secondary Accession #	O60526; Q969U2; Q9HBT1; A2IDB9
UniProt Related Accession #	Q9UNE7
NCBI Official Full Name	E3 ubiquitin-protein ligase CHIP
NCBI Official Synonym Full Names	STIP1 homology and U-box containing protein 1, E3 ubiquitin protein ligase
NCBI Official Symbol	STUB1
NCBI Official Synonym Symbols	CHIP; UBOX1; SCAR16; HSPABP2; NY-CO-7; SDCCAG7
UniProt Protein Name	E3 ubiquitin-protein ligase CHIP
UniProt Synonym Protein Names	Antigen NY-CO-7; CLL-associated antigen KW-8; Carboxy terminus of Hsp70-interacting protein; STIP1 homology and U box-containing protein 1
Protein Family	E3 ubiquitin-protein ligase
UniProt Gene Name	STUB1
UniProt Entry Name	CHIP_HUMAN
NCBI Protein Information	E3 ubiquitin-protein ligase CHIP; antigen NY-CO-7; CLL-associated antigen KW-8; serologically defined colon cancer antigen 7; carboxy terminus of Hsp70-interacting protein; heat shock protein A binding protein 2 (c-terminal)
NCBI Summary for STUB1	This gene encodes a protein containing tetratricopeptide repeat and a U-box that functions as a ubiquitin ligase/cochaperone. The encoded protein binds to and ubiquitinates shock cognate 71 kDa protein (Hspa8) and DNA polymerase beta (Polb), among other targets. Mutations in this gene cause spinocerebellar ataxia, autosomal recessive 16. Alternative splicing results in multiple transcript variants. There is a pseudogene for this gene on chromosome 2. [provided by RefSeq, Jun 2014]

UniProt Comments for STUB1	CHIP: E3 ubiquitin-protein ligase which targets misfolded chaperone substrates towards proteasomal degradation. Collaborates with ATXN3 in the degradation of misfolded chaperone substrates: ATXN3 restricting the length of ubiquitin chain attached to STUB1/CHIP substrates and preventing further chain extension. Ubiquitinates NOS1 in concert with Hsp70 and Hsp40. Modulates the activity of several chaperone complexes, including Hsp70, Hsc70 and Hsp90. Mediates transfer of non-canonical short ubiquitin chains to HSPA8 that have no effect on HSPA8 degradation. Mediates polyubiquitination of DNA polymerase beta (POLB) at 'Lys-41', 'Lys-61' and 'Lys-81', thereby playing a role in base-excision repair: catalyzes polyubiquitination by amplifying the HUWE1/ARF- BP1-dependent monoubiquitination and leading to POLB-degradation by the proteasome. Mediates polyubiquitination of CYP3A4. Ubiquitinates EPHA2 and may regulate the receptor stability and activity through proteasomal degradation. Homodimer. Interacts with BAG2, and with the E2 ubiquitin conjugating enzymes UBE2D1, UBE2D2 and UBE2D3. Interacts with the C-terminal domains of HSPA8 and HSPA1A. Detected in a ternary complex containing STUB1, HSPA1A and HSPBP1. Interacts with MKKS. Interacts with DYX1C1 and POLB. Interacts (via TPR repeats) with HSP90AA1. Interacts (when monoubiquitinated) with ATXN3. Interacts with UBE2W. Interacts (via the U-box domain) with the UBE2V2- UBE2N heterodimer; the complex has a specific 'Lys-63'-linked polyubiquitination activity. Interacts with DNAJB6. Highly expressed in skeletal muscle, heart, pancreas, brain and placenta. Detected in kidney, liver and lung. 2 isoforms of the human protein are produced by alternative splicing. Protein type: EC 6.3.2.19; Ubiquitin ligase; EC 6.3.2.-; Ligase; Ubiquitin conjugating system; Adaptor/scaffold Chromosomal Location of Human Ortholog: 16p13.3 Cellular Component: nucleoplasm; intermediate filament cytoskeleton; endoplasmic reticulum; ubiquitin conjugating enzyme complex; cytoplasm; plasma membrane; cytosol; ubiquitin ligase complex; nuclear inclusion body Molecular Function: protein binding, bridging; protein homodimerization activity; ubiquitin-protein ligase activity; misfolded protein binding; Hsp90 protein binding; Hsp70 protein binding; protein binding; enzyme binding; G-protein-coupled receptor binding; TPR domain binding; ubiquitin protein ligase binding; SMAD binding; kinase binding; ligase activity Biological Process: ubiquitin-dependent protein catabolic process; proteasomal ubiquitin-dependent protein catabolic process; protein autoubiquitination; protein polyubiquitination; unfolded protein response; protein maturation; misfolded or incompletely synthesized protein catabolic process; DNA repair; ubiquitin-dependent SMAD protein catabolic process; positive regulation of protein ubiquitination; transforming growth factor beta receptor signaling pathway; positive regulation of proteasomal ubiquitin-dependent protein catabolic process; positive regulation of ubiquitin-protein ligase activity; regulation of glucocorticoid metabolic process; negative regulation of transforming growth factor beta receptor signaling pathway; negative regulation of protein binding Disease: Spinocerebellar Ataxia, Autosomal Recessive 16
Research Articles on STUB1	**1.** CHIP-mediated ubiquitination of IRE1 contributes to the dynamic regulation of the unfolded protein response.
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