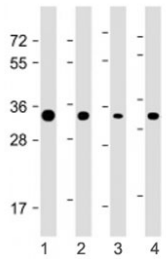
CHIP Antibody 1008CT12.4.1 / STUB1 Monoclonal Antibody [clone 1008CT12.4.1] (F54140)

Catalog No.	Formulation	Size
F54140-0.2ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.2 ml
F54140-0.05ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.05 ml

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human, Mouse
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	1008CT12.4.1
Purity	Protein G purified
UniProt	Q9UNE7
Applications	WB: 1:4000
Limitations	This CHIP Antibody 1008CT12.4.1 / STUB1 Monoclonal Antibody is available for research use only.



CHIP Antibody 1008CT12.4.1 WB Analysis of Human HEK293, HeLa, HepG2 and Mouse L929 Cell Lysates. Western blot analysis of human HEK293 (lane 1), HeLa (lane 2), HepG2 (lane 3), and mouse L929 (lane 4) cell lysates using STUB1 Monoclonal Antibody clone 1008CT12.4.1 at a dilution of 1:4000. A prominent immunoreactive band is detected near 35 kDa in all four samples, consistent with the predicted molecular weight of STUB1.

Description

CHIP Antibody 1008CT12.4.1 / STUB1 Monoclonal Antibody targets STUB1, also known as CHIP (C-terminus of Hsc70-interacting protein), an E3 ubiquitin ligase that participates in the regulation of protein stability and cellular quality-control mechanisms. CHIP functions at the intersection of molecular chaperone activity and the ubiquitin-proteasome

system, helping determine the fate of proteins that require folding assistance or removal. Its activity contributes to maintaining proteostasis and preventing the accumulation of damaged or improperly folded proteins.

The STUB1 protein contains an N-terminal tetratricopeptide repeat (TPR) domain that mediates interactions with molecular chaperones, particularly HSP70 and HSP90. A C-terminal U-box domain supports E3 ubiquitin ligase activity by facilitating interactions with ubiquitin-conjugating enzymes. These domains allow CHIP to recognize selected chaperone-associated substrates and promote their ubiquitination. CHIP also forms homodimers, and its structural organization influences interactions with chaperones, ubiquitination enzymes, and substrate proteins.

CHIP contributes to the degradation of proteins that fail to achieve or maintain their proper conformation. By connecting chaperone-mediated substrate recognition with ubiquitination, it helps regulate the balance between protein refolding and degradation. CHIP also influences the stability of selected signaling proteins and transcriptional regulators, extending its functions beyond the disposal of misfolded proteins. The consequences of CHIP activity depend on substrate identity, associated chaperones, and the cellular environment.

STUB1 has particular importance in the nervous system, where long-lived neurons depend on efficient protein quality-control mechanisms. Pathogenic variants in STUB1 are associated with inherited neurological disorders, including spinocerebellar ataxia. Disease-associated variants can affect different aspects of CHIP function, including protein stability, chaperone interactions, and ubiquitin ligase activity. These alterations may disrupt the coordinated handling of cellular proteins and contribute to progressive neurological dysfunction. Research into STUB1-associated disease has therefore provided insights into the relationship between impaired proteostasis and neurodegeneration.

CHIP Antibody 1008CT12.4.1 provides a monoclonal reagent for investigating the expression of this chaperone-associated ubiquitin ligase. Understanding STUB1 regulation contributes to research on protein turnover, cellular stress responses, neuronal maintenance, and the molecular consequences of impaired protein quality control.

For an alternative antibody with knockout validation and broader experimental characterization, see our STUB1 Antibody targeting CHIP, an E3 ubiquitin ligase involved in cellular protein quality control.

Application Notes

The stated application concentrations are suggested starting points. Titration of the CHIP Antibody 1008CT12.4.1 / STUB1 Monoclonal Antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

Recombinant human STUB1 was used as the immunogen for the CHIP / STUB1 antibody.

Storage

Aliquot the CHIP / STUB1 antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

STUB1 antibody, C-terminus of Hsc70-interacting protein antibody, C-terminus of Hsp70-interacting protein antibody, STIP1 homology and U-box containing protein 1 antibody, STIP1 homology and U-box protein 1 antibody, E3 ubiquitin-protein ligase CHIP antibody, Carboxyl terminus of Hsc70-interacting protein antibody, CHIP E3 ubiquitin ligase antibody, STUB1 ubiquitin ligase antibody, CHIP cochaperone antibody

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