abcam

Product datasheet

Anti-STUB1/CHIP antibody ab2917

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Overview

Product name	Anti-STUB1/CHIP antibody
Description	Rabbit polyclonal to STUB1/CHIP
Host species	Rabbit
Specificity	Detects human carboxyl terminus of hsc70-interacting protein (CHIP).Detects a band of approximately 35 kDa representing CHIP from COS-1 cells overexpressing the human gene including a non-specific band at 80kDa . A customer reported that in mouse cerebrum the antibody detects a band of 35kDa as well as two small mon-specific at 44 and 70 kDa.
Tested applications	**Suitable for:** WB
Species reactivity	**Reacts with:** Mouse, Human **Predicted to work with:** Chicken
Immunogen	Synthetic peptide corresponding to Human STUB1/CHIP aa 218-232. Sequence: VDEKRKKRDIPDYLC (Peptide available as **ab4934**) Run BLAST with Run BLAST with
Positive control	WB: mouse brain, MCF-7 cells, transfected COS-1 cells
General notes	The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.
Storage buffer	Preservative: 0.05% Sodium azide

	Constituents: 0.1% BSA, 99% PBS
Purity	Immunogen affinity purified
Primary antibody notes	A recently identified protein, termed carboxyl terminus of hsc70-interacting protein (CHIP), has been shown to interact both with the constitutive form of hsc70 and the stress inducible form, hsp70. This novel 35 kDa cytoplasmic protein has been shown to be highly expressed in striated muscle in vivo. Additional studies have shown that this protein is expressed over a broad range of cultured tissues. Through immunoprecipitation experiments, CHIP has been shown to directly bind to the carboxyl terminus of hsc70 and hsp70 where it decreases ATPase activity and reduces overall chaperone efficiency. CHIP has also been identified as an important protein in the ubiquitin-proteasome system. CHIP contains a U-box domain and acts as an E3 ubiquitin-ligase in conjunction with hsc70 and hsp90.
Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab2917 in the following tested applications.

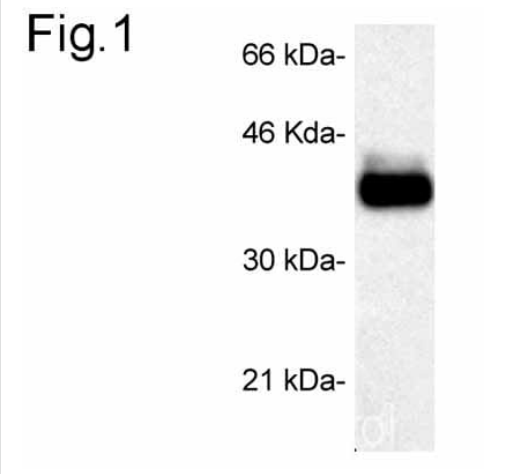
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB	★★★★☆ (2)	Use at an assay dependent concentration. Predicted molecular weight: 35 kDa.

Target

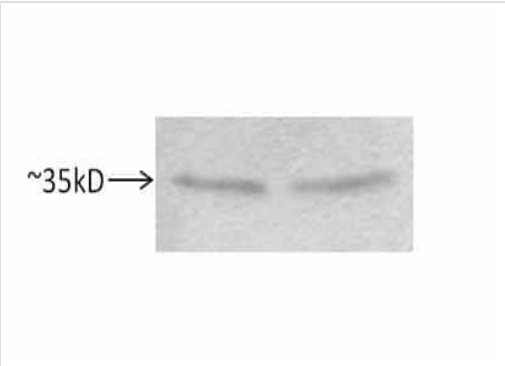
Function	E3 ubiquitin-protein ligase which targets misfolded chaperone substrates towards proteasomal degradation. Ubiquitinates NOS1 in concert with Hsp70 and Hsp40. Modulates the activity of several chaperone complexes, including Hsp70, Hsc70 and Hsp90. Mediates transfer of non-canonical short ubiquitin 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.
Tissue specificity	Highly expressed in skeletal muscle, heart, pancreas, brain and placenta. Detected in kidney, liver and lung.
Pathway	Protein modification; protein ubiquitination.
Sequence similarities	Contains 3 TPR repeats. Contains 1 U-box domain.
Domain	The TPR domain is essential for ubiquitination mediated by UBE2D1.
Post-translational modifications	Phosphorylated upon DNA damage, probably by ATM or ATR. Auto-ubiquitinated; mediated by UBE2D1 and UBE2D2.
Cellular localization	Cytoplasm.

Images



Western blot - Anti-STUB1/CHIP antibody (ab2917)

Western blot detection of transfected COS-1 cells expressing STUB1/CHIP using ab2917.



Western blot - Anti-STUB1/CHIP antibody (ab2917)

Western blot analysis of STUB1/CHIP was performed by loading 20ug of total protein extracted from the left hemisphere (Left lane) or right hemisphere (right lane) of a normal C57BL/6 mouse brain per well on an SDS-PAGE gel. Proteins were transferred to a membrane, blocked with 5% non-fat dry milkand probed with a STUB1/CHIP polyclonal antibody (**ab2915**) at a dilution of 1:1000, followed by a HRP-conjugated goat anti-rabbit IgG secondary antibody. Detection was performed using a chemiluminescent substrate.

Western blot - Anti-STUB1/CHIP antibody (ab2917)

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