

Product datasheet

Anti-CHMP2B antibody ab33174

KO VALIDATED

★★★★★ 6 Abreviews 31 References 3 Images

Overview

Product name	Anti-CHMP2B antibody
Description	Rabbit polyclonal to CHMP2B
Host species	Rabbit
Tested applications	Suitable for: WB, ICC/IF
Species reactivity	Reacts with: Human Predicted to work with: Mouse, Chicken 
Immunogen	Synthetic peptide corresponding to Human CHMP2B aa 150 to the C-terminus (C terminal) conjugated to keyhole limpet haemocyanin. (Peptide available as ab27782)
General notes	<p>Reproducibility is key to advancing scientific discovery and accelerating scientists' next breakthrough.</p> <p>Abcam is leading the way with our range of recombinant antibodies, knockout-validated antibodies and knockout cell lines, all of which support improved reproducibility.</p> <p>We are also planning to innovate the way in which we present recommended applications and species on our product datasheets, so that only applications & species that have been tested in our own labs, our suppliers or by selected trusted collaborators are covered by our Abpromise™ guarantee.</p> <p>In preparation for this, we have started to update the applications & species that this product is Abpromise guaranteed for.</p> <p>We are also updating the applications & species that this product has been “predicted to work with,” however this information is not covered by our Abpromise guarantee.</p> <p>Applications & species from publications and Abreviews that have not been tested in our own labs or in those of our suppliers are not covered by the Abpromise guarantee.</p> <p>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, as well as customer reviews and Q&As.</p>

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	pH: 7.40 Preservative: 0.02% Sodium azide Constituent: PBS
	Batches of this product that have a concentration < 1mg/ml may have BSA added as a stabilising agent. If you would like information about the formulation of a specific lot, please contact our scientific support team who will be happy to help.
Purity	Immunogen affinity purified
Clonality	Polyclonal
Isotype	IgG

Applications

Our [Abpromise guarantee](#) covers the use of **ab33174** 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	★★★★☆	Use a concentration of 1 µg/ml. Predicted molecular weight: 24 kDa.
ICC/IF	★★★★☆	Use a concentration of 5 µg/ml.

Target

Function	Probable core component of the endosomal sorting required for transport complex III (ESCRT-III) which is involved in multivesicular bodies (MVBs) formation and sorting of endosomal cargo proteins into MVBs. MVBs contain intraluminal vesicles (ILVs) that are generated by invagination and scission from the limiting membrane of the endosome and mostly are delivered to lysosomes enabling degradation of membrane proteins, such as stimulated growth factor receptors, lysosomal enzymes and lipids. The MVB pathway appears to require the sequential function of ESCRT-O, -I, -II and -III complexes. ESCRT-III proteins mostly dissociate from the invaginating membrane before the ILV is released. The ESCRT machinery also functions in topologically equivalent membrane fission events, such as the terminal stages of cytokinesis and the budding of enveloped viruses (HIV-1 and other lentiviruses). ESCRT-III proteins are believed to mediate the necessary vesicle extrusion and/or membrane fission activities, possibly in conjunction with the AAA ATPase VPS4.
Tissue specificity	Widely expressed. Expressed in brain, heart, skeletal muscle, spleen, kidney, liver, small intestine, pancreas, lung, placenta and leukocytes. In brain, it is expressed in cerebellum, cerebral cortex, medulla, spinal chord, occipital lobe, frontal lobe, temporal lobe and putamen.
Involvement in disease	Defects in CHMP2B are the cause of frontotemporal dementia, chromosome 3-linked (FTD3) [MIM:600795]. FTD3 is characterized by an onset of dementia in the late 50's initially characterized by behavioral and personality changes including apathy, restlessness, disinhibition and hyperorality, progressing to stereotyped behaviors, non-fluent aphasia, mutism and dystonia, with a marked lack of insight. The brains of individuals with FTD3 have no distinctive

neuropathological features. They show global cortical and central atrophy, but no beta-amyloid deposits.

Sequence similarities

Belongs to the SNF7 family.

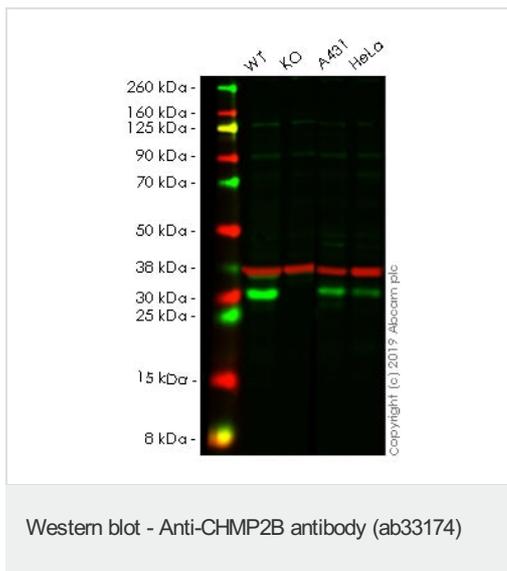
Domain

The acidic C-terminus and the basic N-terminus are thought to render the protein in a closed, soluble and inactive conformation through an autoinhibitory intramolecular interaction. The open and active conformation, which enables membrane binding and oligomerization, is achieved by interaction with other cellular binding partners, probably including other ESCRT components.

Cellular localization

Cytoplasm > cytosol. Late endosome membrane.

Images



All lanes : Anti-CHMP2B antibody (ab33174) at 1 µg/ml

Lane 1 : Wild-type A549 whole cell lysate

Lane 2 : CHMP2B knockout A549 whole cell lysate

Lane 3 : A431 whole cell lysate

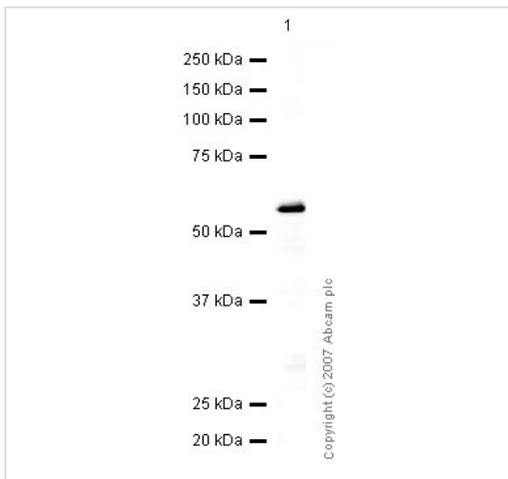
Lane 4 : HeLa whole cell lysate

Lysates/proteins at 20 µg per lane.

Predicted band size: 24 kDa

Lanes 1 -4: Merged signal (red and green). Green - ab33174 observed at 30 kDa. Red - loading control, ab8245, observed at 37 kDa.

ab33174 was shown to recognize CHMP2B in wild-type A549 cells as signal was lost at the expected MW in CHMP2B knockout cells. Additional cross-reactive bands were observed in the wild-type and knockout cells. Wild-type and CHMP2B knockout samples were subjected to SDS-PAGE. The membrane was blocked with 3% Milk. Ab33174 and ab8245 (Mouse anti-GAPDH loading control) were incubated overnight at 4°C at 1 µg/ml and 1/20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preabsorbed ab216773 and Goat anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed ab216776 secondary antibodies at 1/20000 dilution for 1 hour at room temperature before imaging.



Western blot - Anti-CHMP2B antibody (ab33174)

Anti-CHMP2B antibody (ab33174) at 1 µg/ml + Tagged recombinant CHMP2B protein at 0.1 µg

Secondary

IRDye 680 Conjugated Goat Anti-Rabbit IgG (H+L) at 1/10000 dilution

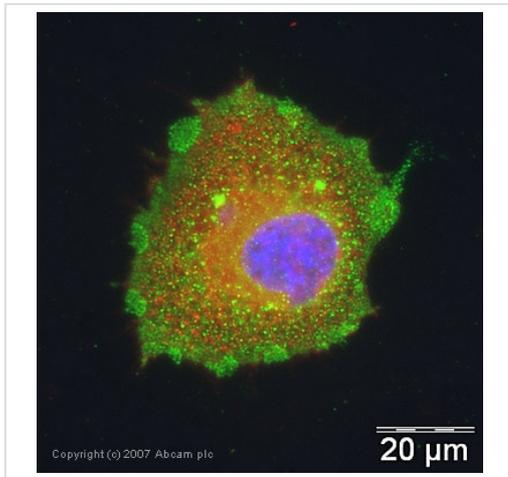
Performed under reducing conditions.

Predicted band size: 24 kDa

Observed band size: 55 kDa

[why is the actual band size different from the predicted?](#)

Ab33174 was tested on the full length recombinant tagged CHMP2B protein which is predicted to run at 50 kDa.



Immunocytochemistry/ Immunofluorescence - Anti-CHMP2B antibody (ab33174)

ICC/IF image of ab33174 stained human HeLa cells. The cells were PFA fixed (10 min), permeabilised in TBS-T (20 min) and incubated with the antibody (ab33174, 5µg/ml) for 1h at room temperature. 1%BSA / 10% normal serum / 0.3M glycine was used to quench autofluorescence and block non-specific protein-protein interactions. The secondary antibody (green) was Alexa Fluor® 488 goat anti-rabbit IgG (H+L) used at a 1/1000 dilution for 1h. Alexa Fluor® 594 WGA was used to label plasma membranes (red). DAPI was used to stain the cell nuclei (blue).

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