

Product datasheet

Anti-Ubiquitin antibody ab7780

★★★★☆ 32 Abreviews 212 References 6 Images

Overview

Product name	Anti-Ubiquitin antibody
Description	Rabbit polyclonal to Ubiquitin
Host species	Rabbit
Tested applications	Suitable for: ICC, IHC-P
Species reactivity	Reacts with: Rat, Human Predicted to work with: Mouse, Horse, Cow, Monkey, African green monkey 
Immunogen	Recombinant full length protein corresponding to Human Ubiquitin.
General notes	<p>This antibody stains the periphery of senile plaques and of neurofibrillary tangles in Alzheimer's disease brain, the Lewy bodies in Parkinson's disease brain, and the Mallory bodies in alcoholic liver disease.</p> <p>This product is FOR RESEARCH USE ONLY. For commercial use, please contact partnerships@abcam.com.</p> <p>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.</p> <p>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</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. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.60 Preservative: 0.1% Sodium azide Constituents: PBS, 1% BSA
Purity	Immunogen affinity purified
Clonality	Polyclonal

Isotype

IgG

Applications

The Abpromise guarantee

Our [Abpromise guarantee](#) covers the use of ab7780 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
ICC		Use at an assay dependent concentration.
IHC-P	★★★★★ (3)	1/50. Perform heat mediated antigen retrieval before commencing with IHC staining protocol. Boil tissue sections in 10mM citrate buffer, pH 6.0 for 10 min followed by cooling at RT for 20 min.

Target

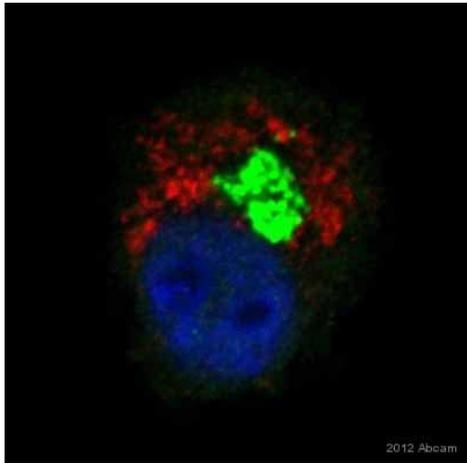
Relevance

Function: Ubiquitin exists either covalently attached to another protein, or free (unanchored). When covalently bound, it is conjugated to target proteins via an isopeptide bond either as a monomer (monoubiquitin), a polymer linked via different Lys residues of the ubiquitin (polyubiquitin chains) or a linear polymer linked via the initiator Met of the ubiquitin (linear polyubiquitin chains). Polyubiquitin chains, when attached to a target protein, have different functions depending on the Lys residue of the ubiquitin that is linked: Lys-6-linked may be involved in DNA repair; Lys-11-linked is involved in ERAD (endoplasmic reticulum-associated degradation) and in cell-cycle regulation; Lys-29-linked is involved in lysosomal degradation; Lys-33-linked is involved in kinase modification; Lys-48-linked is involved in protein degradation via the proteasome; Lys-63-linked is involved in endocytosis, DNA-damage responses as well as in signaling processes leading to activation of the transcription factor NF-kappa-B. Linear polymer chains formed via attachment by the initiator Met lead to cell signaling. Ubiquitin is usually conjugated to Lys residues of target proteins, however, in rare cases, conjugation to Cys or Ser residues has been observed. When polyubiquitin is free (unanchored-polyubiquitin), it also has distinct roles, such as in activation of protein kinases, and in signaling. Similarity: Belongs to the ubiquitin family. Contains 3 ubiquitin-like domains.

Cellular localization

Cell Membrane, Cytoplasmic and Nuclear

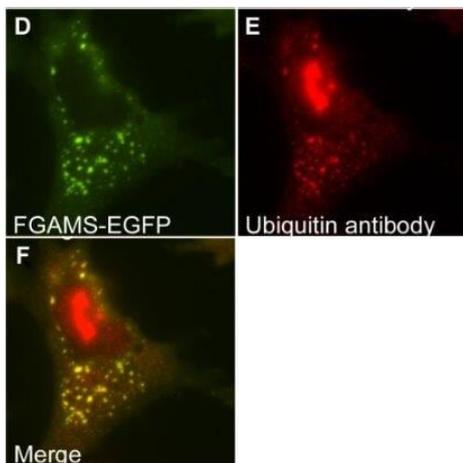
Images



Immunocytochemistry - Anti-Ubiquitin antibody (ab7780)

Image courtesy of Armen Petrosyan by Abreview.

ab7780 staining Ubiquitin in Panc-1 cells by Immunocytochemistry/Immunofluorescence. Cells were fixed in formaldehyde, blocked with 1% serum for 1 hour at 22°C and then incubated with ab7780 at a 1/2000 dilution for 1 hour at 22°C. The secondary was used at a 1/200 dilution. Green - Golgi residential proteins C2GnT-M. Red - Ubiquitin. Blue - nucleus staining by DAPI.



Immunocytochemistry - Anti-Ubiquitin antibody (ab7780)

Zhao A et al., PLoS One., 2013; 8(2): e56203. Fig 4.; doi: 10.1371/journal.pone.0056203 Reproduced under the Creative Commons license <http://creativecommons.org/licenses/by/4.0/>

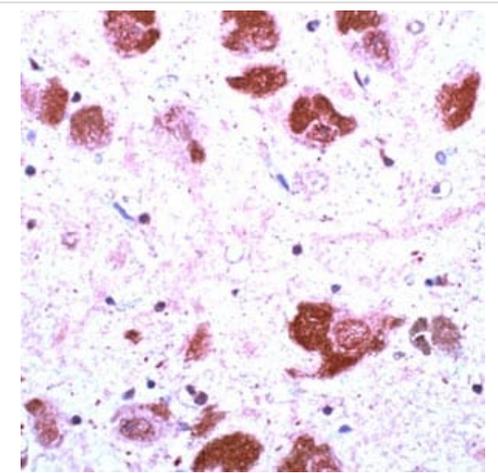
ab7780 staining ubiquitin in cells transfected with FGAMS-EGFP by ICC/IF (immunocytochemistry/immunofluorescence). Cells were fixed with 3.7% methanol-free formaldehyde at 37°C for 15-20 minutes, blocked with 5% goat serum in PBS-T buffer for 30-60 minutes at room temperature. An Alexa Fluor® 594-conjugated Goat anti-rabbit polyclonal was used as the secondary antibody



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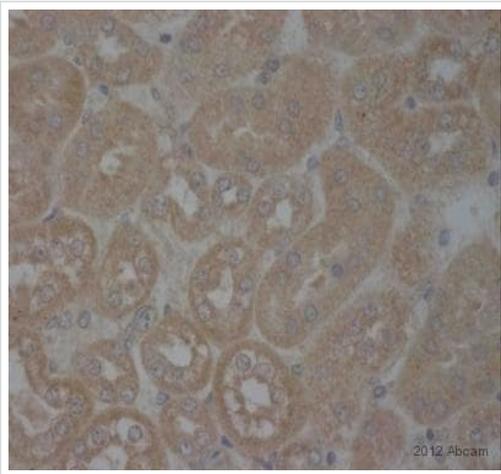
Immunocytochemistry - Anti-Ubiquitin antibody (ab7780)

ICC/IF image of [ab7780](#) stained MCF7 cells. The cells were 4% PFA fixed (10 min) and then incubated in 1%BSA / 10% normal goat serum ([ab7481](#)) / 0.3M glycine in 0.1% PBS-Tween for 1h to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody ([ab7780](#), 1µg/ml) overnight at +4°C. The secondary antibody (green) was Alexa Fluor® 488 goat anti-mouse IgG (H+L) [ab150113](#) used at a 1/1000 dilution for 1h. Alexa Fluor® 594 WGA was used to label plasma membranes (red) at a 1/200 dilution for 1h. DAPI was used to stain the cell nuclei (blue) at a concentration of 1.43µM.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Ubiquitin antibody (ab7780)

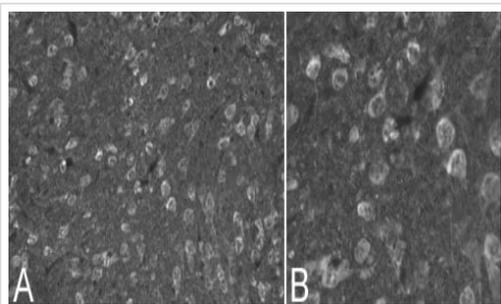
[ab7780](#) (1/100) staining Ubiquitin in paraffin-embedded brain sections of a patient with Alzheimer's disease.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Ubiquitin antibody (ab7780)

This image is courtesy of an anonymous Abreview

ab7780 staining ubiquitin in Mouse kidney tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with formaldehyde and blocked with 1% BSA for 1 hour at 25°C; antigen retrieval was by heat mediation in a citrate buffer. Samples were incubated with primary antibody (1/90) for 16 hours at 4°C. A HRP-conjugated Goat anti-rabbit polyclonal (1/1000) was used as the secondary antibody.



Immunohistochemistry (PFA perfusion fixed frozen sections) - Anti-Ubiquitin antibody (ab7780)

ab7780 at a dilution of 1/1000, staining Ubiquitin in neurons (Alexa 488 secondary at 1/2000) on 30µm coronal rat brain (ab29475) tissue sections in free floating IHC (see protocol link for detailed description). Image shows neuronal staining observed with [A] 20x objective and [B] 40x objective.

NB: No labeling observed following omission of primary antibody.

Sections were viewed using an Axioplan 2 Imaging microscope (Imaging Associates) fitted with 10x, 20x and 40x Plan-Neofluorobjectives (Zeiss, Germany) and images were taken using a AxioCam Hrm digital camera (Zeiss, Germany) and AxioVision software (Imaging Associates).

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