abcam

ab277105

Anti-Ube2B antibody [PCRP-UBE2B-1C7]

Key facts

Isotype	IgG2b
Host species	Mouse
Storage buffer	Preservative: 0.05% Sodium azide Constituents: PBS, 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	Recombinant Full Length Protein corresponding to Human UBE2B. Database link P63146
Clone number	PCRP-UBE2B-1C7
Purification technique	Affinity purification Protein A/G
Concentration	0.2 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →
Purification notes	Purified from bioreactor concentrate

Reactivity data

ICC

Tested

Species	Human
Dilution info	1-2 µg/mL
Notes	-

Predicted

Species	Mouse, Rat, Zebrafish
Dilution info	-
Notes	-

Not recommended

Species	Recombinant full length protein - Human
Dilution info	-
Notes	-

Flow Cyt

Tested

Species	Human
Dilution info	1-2 µg for 10^6 Cells
Notes	-

Predicted

Species	Mouse, Rat, Zebrafish
Dilution info	-
Notes	-

Not recommended

Species	Recombinant full length protein - Human
Dilution info	-
Notes	-

Protein Array

Tested

Species	Recombinant full length protein - Human
Dilution info	-
Notes	-

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

Predicted

Species	Mouse, Rat, Zebrafish
Dilution info	-
Notes	-

Target data

See full target information UBE2B

Function

E2 ubiquitin-conjugating enzyme that accepts ubiquitin from the ubiquitin-activating enzyme E1 and transfers it to a E3 ubiquitin-protein ligase (PubMed:16337599, PubMed:17108083, PubMed:17130289, PubMed:1717990, PubMed:20061386). In vitro catalyzes 'Lys-11'-, as well as 'Lys-48'- and 'Lys-63'-linked polyubiquitination (PubMed:20061386). Together with the E3 enzyme BRE1 (RNF20 and/or RNF40), plays a role in transcription regulation by catalyzing the monoubiquitination of histone H2B at 'Lys-120' to form H2BK120ub1 (PubMed:16337599). H2BK120ub1 gives a specific tag for epigenetic transcriptional activation, elongation by RNA polymerase II, telomeric silencing, and is also a prerequisite for H3K4me and H3K79me formation (PubMed:16337599). May play a role in DNA repair (PubMed:8062904). Associates to the E3 ligase RAD18 to form the UBE2B-RAD18 ubiquitin ligase complex involved in mono-ubiquitination of DNA-associated PCNA on 'Lys-164' (PubMed:17108083, PubMed:17130289). In association with the E3 enzyme UBR4, is involved in N-end rule-dependent protein degradation (PubMed:38182926). May be involved in neurite outgrowth (By similarity).

Storage

Shipped at conditions	Blue Ice

Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	Ube2B also known as ubiquitin-conjugating enzyme E2 B plays a mechanical role in the ubiquitination process. This protein carries out its function by transferring ubiquitin from an E1 enzyme to target substrates often assisted by an E3 ligase. Ube2B is a smaller protein with a mass of around 22 kDa. It shows expression in a wide range of tissues including testis and brain suggesting tissue-specific roles.
Biological function summary	The activity of Ube2B is central to the ubiquitin-proteasome pathway where it marks proteins for degradation. Ube2B operates as part of the larger ubiquitination cascade and interacts with various E3 ligases such as RNF8 which helps to mediate its target protein selectivity. This highly regulated process ensures proper cellular protein balance and is critical for maintaining cellular homeostasis.
Pathways	Ube2B has important roles in the DNA damage response and cell cycle regulation. The ubiquitin-proteasome system facilitated by Ube2B regulates the turnover of key cell cycle proteins and supports timely progression through cell cycle phases. Ube2B works closely with proteins such as RAD18 during DNA repair processes facilitating the post-replication repair of DNA lesions.
Associated diseases and disorders	The altered function or expression of Ube2B impacts specific conditions such as cancer and neurodegenerative diseases. In cancer dysregulation can lead to uncontrolled cell proliferation due to abnormal degradation of regulatory proteins. Similarly neurodegenerative disorders involve Ube2B through aggregation and clearance failures of proteins like tau or alpha-synuclein. Ube2B's interaction with these disease processes accentuates its significance in maintaining cellular health.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

We do not recommend this combination. It is not covered by our product promise.

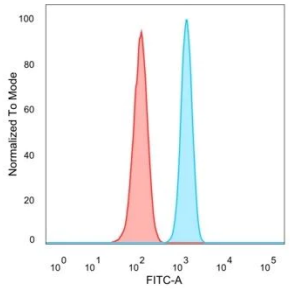
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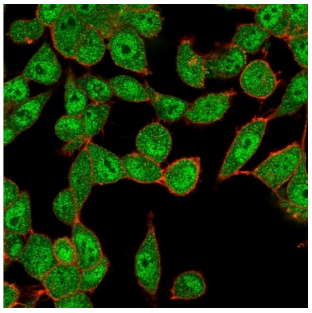
3 product images



Flow Cytometry - Anti-Ube2B antibody [PCRP-UBE2B-1C7] (ab277105)

Ube2B Flow Cytometry staining using mouse Anti-Ube2B antibody

Flow cytometry analysis of PFA-fixed HeLa (human epithelial cell line from cervix adenocarcinoma) cells labeling Ube2B using ab277105 at 2 µg / 10^6 cells followed by goat anti-mouse IgG-CF488 (blue); unstained cells (red).



Immunocytochemistry - Anti-Ube2B antibody [PCRP-UBE2B-1C7] (ab277105)

Ube2B Immunocytochemistry staining using mouse Anti-Ube2B antibody

Immunofluorescence analysis of PFA-fixed HeLa (human epithelial cell line from cervix adenocarcinoma) cells labeling Ube2B with ab277105 at 2 µg/ml, followed by goat anti-mouse IgG-CF488 (green); phalloidin counterstain (red).



Protein Array - Anti-Ube2B antibody [PCRP-UBE2B-1C7] (ab277105)

Analysis of Protein Array containing more than 19,000 full-length human proteins using ab277105. Z- and S- Score: The Z-score represents the strength of a signal that a monoclonal antibody (MAb) (in combination with a fluorescently-tagged anti-IgG secondary antibody) produces when binding to a particular protein on the HuProtTM array. Z-scores are described in units of standard deviations (SD's) above the mean value of all signals generated on that array. If targets on HuProtTM are arranged in descending order of the Z-score, the S-score is the difference (also in

units of SD's) between the Z-score. S-score therefore represents the relative target specificity of a MAb to its intended target. A MAb is considered to specific to its intended target, if the MAb has an S-score of at least 2.5. For example, if a MAb binds to protein X with a Z-score of 43 and to protein Y with a Z-score of 14, then the S-score for the binding of that MAb to protein X is equal to 29.

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