

Ubiquitin Polyclonal Antibody

Catalog NumberPA3-16717

Product data sheet

Details		Species Reactivity	
Size	50 µL	Species reactivity	Human, Mouse, Rat
Host/Isotope	Rabbit / IgG	Published species	Yeast, Mouse
Class	Polyclonal	Tested Applications	
Type	Antibody	Immunohistochemistry (Frozen) (IHC (F))	1:500-1:1,000
Immunogen	Purified ubiquitin conjugated with glutaraldehyde to KLH	Immunohistochemistry (Paraffin) (IHC (P))	1:500-1:1,000
Conjugate	Unconjugated	Western Blot (WB)	1:5,000-1:10,000
Form	Liquid	in situ PLA (PLA)	Assay-Dependent
Concentration	Conc. Not Determined	Immunocytochemistry (ICC/IF)	1:500-1:1,000
Storage buffer	whole serum	Published Applications	
Contains	5mM sodium azide	Western Blot (WB)	See 1 publications below
Storage Conditions	Store at 4°C short term. For long term storage, store at -20°C, avoiding freeze/thaw cycles.	Immunohistochemistry (IHC)	See 1 publications below

* Suggested working dilutions are given as a guide only. It is recommended that the user titrate the product for use in their own experiment using appropriate negative and positive controls.

Background/Target Information

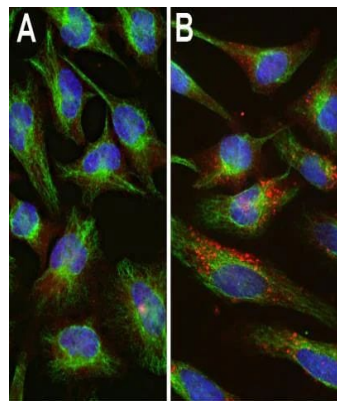
Ubiquitin, a highly conserved protein that has a major role in targeting cellular proteins for degradation by the 26S proteasome, is synthesized as a precursor protein consisting of either polyubiquitin chains or a single ubiquitin fused to an unrelated protein. This gene encodes a fusion protein consisting of ubiquitin at the N terminus and ribosomal protein S27a at the C terminus. When expressed in yeast, the protein is post-translationally processed, generating free ubiquitin monomer and ribosomal protein S27a. Ribosomal protein S27a is a component of the 40S subunit of the ribosome and belongs to the S27AE family of ribosomal proteins. It contains C4-type zinc finger domains and is located in the cytoplasm. Pseudogenes derived from this gene are present in the genome. As with ribosomal protein S27a, ribosomal protein L40 is also synthesized as a fusion protein with ubiquitin; similarly, ribosomal protein S30 is synthesized as a fusion protein with the ubiquitin-like protein fubi. Multiple alternatively spliced transcript variants that encode the same proteins have been identified.

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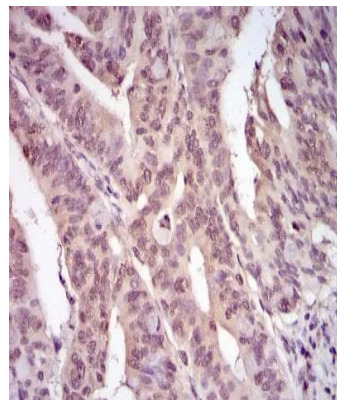
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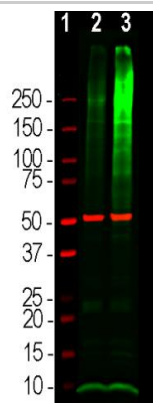
Ubiquitin Antibody (PA3-16717) in ICC/IF

Immunocytochemistry analysis of Ubiquitin in HeLa cells. Samples were incubated in Ubiquitin polyclonal antibody (Product # PA3-16717) using a dilution of 1:1000. Ubiquitin (red) costained with chicken pAb to vimentin, dilution 1:10,000, in green. The blue is DAPI staining of nuclear DNA. [A] Control HeLa cells maintained in normal medium, [B] HeLa cells treated with 10 μ M of the proteasome inhibitor lactacystin (Lc) for 24 hours. Proteasomal inhibition leads to formation of strongly ubiquitin positive cytoplasmic inclusions. Note the diffuse cytoplasmic ubiquitin staining in control cells and well defined ubiquitin positive inclusions in the Lc treated cells.



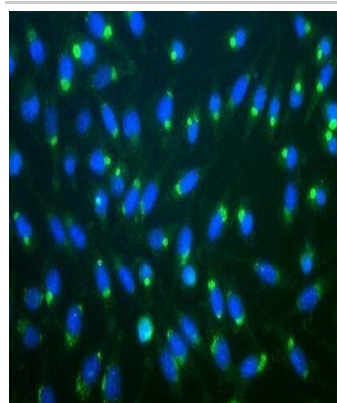
Ubiquitin Antibody (PA3-16717) in IHC (P)

Immunohistochemical analysis of Ubiquitin in human rectal cancer. Samples were incubated in Ubiquitin polyclonal antibody (Product # PA3-16717) followed by DAB with hematoxylin counterstain.



Ubiquitin Antibody (PA3-16717) in WB

Western blot analysis of Ubiquitin in HEK293 cell lysates. Samples were incubated in Ubiquitin polyclonal antibody (Product # PA3-16717 using a dilution of 1:5000. Ubiquitin antibody and mouse beta-Tubulin antibody, dilution 1:10000 (Red) used as a loading control. [1] protein standard (Red), [2] cells maintained in normal medium, [3] cells treated with proteasome inhibitor lactacystin (Lc) at 10 μ M for 16 hours. Lysed cells were lysed and the lysate subjected to electrophoresis on a 4-20% SDS-PAGE gel, then electrophoretically transferred to PVDF membranes. The smear detected above the 200 kDa standard represents accumulations of ubiquitinated proteins in the Lc treated cells. The prominent band at ~8 kDa corresponds to monoubiquitin.



Ubiquitin Antibody (PA3-16717) in ICC/IF

Immunocytochemistry analysis of Ubiquitin in aggresomes of mouse L-cells treated with lactacystine. Samples were incubated in Ubiquitin polyclonal antibody (Product # PA3-16717).

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PubMed References For Ubiquitin Polyclonal Antibody

1 Western Blot References

Species / Dilution	Summary
	PA3-16717 was used in Western Blotting to study the role of USP13 in knockout mice expressing lentiviral human alpha-synuclein and investigate the impact of a small molecule inhibitor of USP13, BK50118-C, on alpha-synuclein pathology and animal behavior.
Mouse / 1:5000	International journal of molecular sciences (2022; 23:) "Inhibition of Ubiquitin-Specific Protease-13 Improves Behavioral Performance in Alpha-Synuclein Expressing Mice." Author(s):Liu X,Balaraman K,Lynch CC,Hebron M,Shah PK,Hu S,Stevenson M,Wolf C,Moussa C PubMed Article URL: http://dx.doi.org/10.3390/ijms23158131

1 Immunohistochemistry References

Species / Dilution	Summary
	PA3-16717 was used in Immunohistochemistry to suggest that novel USP13 inhibitors improve neurodegenerative pathology via antagonism of de-ubiquitination, thus alleviating neurotoxic protein burden in neurodegenerative diseases.
Mouse / 1:5000	Metabolites (2021; 11:) "Novel Ubiquitin Specific Protease-13 Inhibitors Alleviate Neurodegenerative Pathology." Author(s):Liu X,Balaraman K,Lynch CC,Hebron M,Wolf C,Moussa C PubMed Article URL: http://dx.doi.org/10.3390/metabo11090622

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