PRODUCT INFORMATION

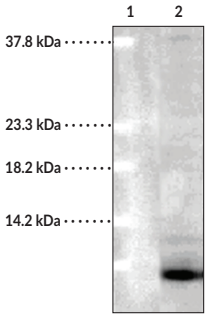
Ubiquitin Monoclonal Antibody (Clone 6C11-B3)

Item No. 13723

Overview and Properties

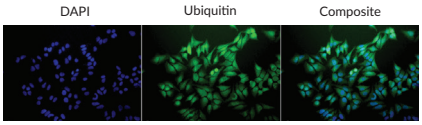
Contents:	This vial contains 50 or 200 µg of protein G-affinity purified monoclonal antibody.
Immunogen:	Bovine ubiquitin conjugated to KLH
Cross Reactivity:	(+) Ubiquitin
Species Reactivity:	(+) Human, bovine, mouse, rat
Uniprot No.:	P0CG53
Form:	Liquid
Storage:	-20°C (as supplied)
Stability:	≥1 year
Storage Buffer:	PBS, pH 7.4, with 50% glycerol and 0.09% sodium azide
Clone:	6C11-B3
Host:	Mouse
Isotype:	IgG2aκ
Applications:	ELISA, Immunocytochemistry (ICC), Immunofluorescene (IF), and Western blot (WB); the recommended starting dilution is 1:100 for ICC and IF and 1:1,000 for WB. ELISA and other applications were not tested, therefore optimal working concentration/ dilution should be determined empirically.

Images

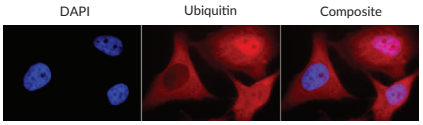


Lane 1: MW Markers
Lane 2: Human cell lysates (15 µg)

WB of Ubiquitin Monoclonal Antibody (Clone 6C11-B3) at a dilution of 1:1,000.



Immunohistochemical/Immunofluorescent labeling of human HeLa cells. Cells were fixed with 2% formaldehyde for 20 minutes at room temperature and incubated with Ubiquitin Monoclonal Antibody (Clone 6C11-B3) at a dilution of 1:100 for 12 hours at 4°C. Then cells were incubated with FITC Goat Anti-Mouse (green) at a dilution of 1:200 for two hours at room temperature and counterstained with DAPI (blue) at a dilution of 1:40,000 for two hours at room temperature. Positive staining was localized to the cytoplasm.



Immunohistochemical/Immunofluorescent labeling of human HeLa cells. Cells were fixed with 2% formaldehyde for 20 minutes at room temperature and incubated with Ubiquitin Monoclonal Antibody (Clone 6C11-B3) at a dilution of 1:100 for 12 hours at 4°C. Then cells were incubated with APC Goat Anti-Mouse (red) at a dilution of 1:200 for two hours at room temperature and counterstained with DAPI (blue) at a dilution of 1:40,000 for two hours at room temperature. Positive staining was localized to the cytoplasm.

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent *via* email to your institution.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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Description

Ubiquitin is a regulatory protein encoded by three gene classes in humans, which code for fusion proteins between ubiquitin and zinc-finger proteins, ribosomal proteins, or ubiquitin repeats that are cleaved by esterases to release monomeric ubiquitin.[1,2] It is ubiquitously expressed and highly conserved among eukaryotic species. Ubiquitin is conjugated to misfolded, abnormal, short-lived, or foreign proteins by ubiquitin-conjugating enzymes (E2) and substrate-specific ubiquitin ligases (E3) to target them for degradation by the 26S proteasome or lysosome.[1,3] It is also conjugated to proteins to modify cell signaling through regulation of protein-protein interactions, activity, or subcellular localization.[3] Dysregulation of ubiquitination has been implicated in the pathogenesis of neurodegenerative diseases, including Parkinson's and Alzheimer's diseases.[4] Cayman's Ubiquitin Monoclonal Antibody (Clone 6C11-B3) can be used for ELISA, immunocytochemistry (ICC), immunofluorescence (IF), and Western blot (WB) applications. The antibody recognizes ubiquitin at ~10 kDa from human samples.

References

1. Wilkinson, K.D. Roles of ubiquitinylation in proteolysis and cellular regulation. *Annu. Rev. Nutr.* **15**, 161-189 (1995).
2. Bonifacino, J.S. and Weissman, A.M. Ubiquitin and the control of protein fate in the secretory and endocytic pathways. *Annu. Rev. Cell Dev. Biol.* **14**, 19-57 (1998).
3. Komander, D. and Rape, M. The ubiquitin code. *Annu. Rev. Biochem.* **81**, 203-209 (2012).
4. Ciechanover, A. and Brundin, P. The ubiquitin proteasome system in neurodegenerative diseases: Sometimes the chicken, sometimes the egg. *Neuron* **40(2)**, 427-446 (2003).

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