

Technical Data Sheet

Ascites Mouse Anti-Ubiquitin

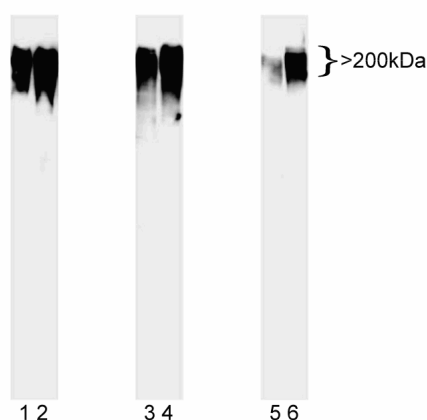
Product Information

Material Number:	550944
Size:	100 µl
Clone:	6C1.17
Isotype:	Mouse IgG1
Reactivity:	QC Testing: Human
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.

Description

Eukaryotic cells have evolved several pathways to degrade unwanted proteins. One of the best-understood of these pathways is the ubiquitin-mediated pathway. Ubiquitin is a small (8.5 kDa), highly conserved protein that covalently modifies cellular proteins and selectively targets these proteins for degradation by the 26S ATP-dependent proteasome. Proteins that have been modified by addition of a multiubiquitin chain are preferred substrates of the proteasome. However, ubiquitination does not serve exclusively to mark proteins for degradation. The ubiquitin proteolytic system plays an important role in many cellular processes including regulation of cell cycle, modulation of the immune and inflammatory responses, control of signal transduction pathways, development and differentiation. Furthermore, abnormalities in the ubiquitin-mediated pathway have been shown to cause pathological disorders and in some cases lead to unregulated cell growth.

The clone 6C1.17 antibody is being provided as an ascites preparation that recognizes human ubiquitinated proteins, but should also recognize other species because of the highly conserved nature of this molecule. Bovine erythrocyte ubiquitin was coupled to ovalbumin with glutaraldehyde and used as the immunogen.



Western blot analysis of Ubiquitin. Human HL-60 cells (ATCC CCL-240) were either left untreated (lanes 1, 3, 5) or treated (2, 4, 6) with lactacystin* (20 mM, 4 hr). Lysate from these cells was probed with anti-ubiquitin at dilutions of 1:2000 (lanes 1, 2), 1:4000 (lanes 3, 4), and 1:8000 (lanes 5, 6). Ubiquitinated proteins are identified at ~200kDa. *Lactacystin is a proteasome inhibitor and causes ubiquitinated proteins to accumulate.

Preparation and Storage

Store undiluted at 4°C.

Application Notes

Application

Western blot	Routinely Tested
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Recommended Assay Procedure:

For more information on performing Western Blot analysis, please visit http://www.bdbiosciences.com/support/resources/cell_biology/index.jsp

Suggested Companion Products

Catalog Number	Name	Size	Clone
554002	HRP Goat Anti-Mouse Ig	1.0 ml	(none)

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Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.

References

Chen L, Smith L, Accavitti-Loper MA, Omura S, Bingham Smith J. Ubiquitylation and destruction of endogenous c-mycS by the proteasome: are myc boxes dispensable. *Arch Biochem Biophys*. 2000; 374(2):306-312. (Clone-specific: Western blot)

Hershko A, Ciechanover A. The ubiquitin system. *Annu Rev Biochem*. 1998; 67:425-479. (Biology)

Smith L, Chen L, Reyland ME. Activation of atypical protein kinase C zeta by caspase processing and degradation by the ubiquitin-proteasome system. *Arch Biochem Biophys*. 2000; 275(51):40620-40627. (Clone-specific: Western blot)

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