

DESCRIPTION

Specificity	This antibody detects endogenous, human proteins containing K48-linked polyubiquitin chains in Western blots. This antibody detects purified, recombinant K48-linked polyubiquitin chains, but has no cross-reactivity to monoubiquitin or polyubiquitin of other linkages
Source	Recombinant Monoclonal Rabbit IgG Clone # 1001C
Purification	Protein A or G purified from cell culture supernatant
Immunogen	K48-linkage from human ubiquitin Accession # P0CG47
Formulation	0.5 mg/mL in PBS, pH 7.4, 50% glycerol, 0.09% sodium azide See Certificate of Analysis for details.

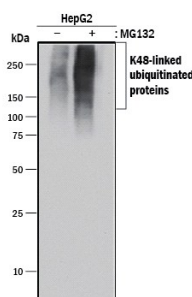
APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

	Recommended Concentration	Sample
Western Blot	0.5 µg/mL	See Below
Immunocytochemistry	Recommended concentration for ICC applications is 3 µg/ml.	

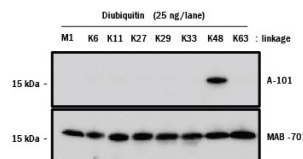
DATA

Western Blot



Detection of Human Ubiquitin by Western Blot. Western blot shows lysates of HepG2 human hepatocellular carcinoma cell line untreated (-) or treated (+) with MG132. PVDF membrane was probed with 0.5 µg/mL of Rabbit Anti-Ubiquitin K48 Linkage Monoclonal Antibody (Catalog # A-101) followed by HRP-conjugated Anti-Rabbit IgG Secondary Antibody (Catalog # HAF008). A specific band was detected for Ubiquitin at approximately 75-250 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Western Blot



25 ng of each linkage of recombinant diubiquitin was run on a 10-20% SDS-PAGE gel prior to blotting on a PVDF membrane. Western blots were developed using anti-K48 mAb (A-101, upper panel) or anti-ubiquitin mAb (MAB701, lower panel) primaries at 0.5 µg/ml. The appropriate HRP-labeled anti-rabbit or anti-mouse (R&D Systems HAF008 or HAF007) secondary antibodies were used at a 1:2000 dilution. A single band of appropriate size was detected only in the K48-linked diubiquitin lane using A-101.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Store the unopened product at -20 °C. Use a manual defrost freezer and avoid repeated freeze-thaw cycles. Storage below -20 °C is not recommended. Do not use past expiration date.

BACKGROUND

Polyubiquitin chains are composed of ubiquitin monomers that are covalently linked through isopeptide bonds (other than linear, or "Met1-linked" polyubiquitin). Isopeptides are formed between a lysine residue of one Ubiquitin molecule and the C-terminal glycine residue of another Ubiquitin molecule. Seven of the seventy-six amino acids in ubiquitin are lysine residues that can participate in polyubiquitin chain formation. Linkage through specific lysine residues is thought to serve as a signal that affects protein degradation, signaling, trafficking, and other cellular processes. K48-linked polyubiquitin chains attached to substrate proteins often serve as a recognition sequence for targeting and destruction of the substrate by the 26S Proteasome. This antibody detects the K48 linkage. It does not detect monoubiquitin or ubiquitin linked via any other lysine residue. Reactivity across all species is anticipated.

PRODUCT SPECIFIC NOTICES

Not for use in humans