

Datasheet for 200-301-H63**Caspase-3 Antibody****Overview**

Description:	Anti-Caspase-3 (MOUSE) Monoclonal Antibody - 200-301-H63
Item No.:	200-301-H63
Size:	100 µg
Applications:	FC, IF, IHC, WB
Reactivity:	Human
Host Species:	Mouse

Product Details

Background:	Anti-Caspase-3 antibody detects human Caspase-3. Caspases are a family of cysteine proteases that are key mediators of programmed cell death or apoptosis. The precursor form of all caspases is composed of a prodomain, and large and small catalytic subunits. The active forms of caspases are generated by several stimuli including ligand-receptor interactions, growth factor deprivation and inhibitors of cellular functions. All known caspases require cleavage adjacent to aspartates to liberate one large and one small subunit, which associate into a2b2 tetramer to form the active enzyme. Gene for Caspase-3 also known as Yama, CPP32, and apopain codes for a 32-kDa protein. Caspase-3 cleaves the death substrate poly (ADP-ribose) polymerase (PARP) to a specific 85 kDa form observed during apoptosis and is inhibitable by the CrmA protein. Other Caspase-3 substrates include DNA-PK, actin, GAS2, and procaspase-6, etc. Caspase-3 is activated by cleavage events at Asp-28/Ser-29 (between N-terminal pro-domain) and Asp-175/Ser-176 (between large and small subunits) to generate a large subunit of 17-kDa and a small subunit of 12-kDa. Anti-Caapase-3 is ideal for investigators involved in apoptosis, cytokines and growth factor research.
Synonyms:	Cpp32, Caspase-3 subunit p17, Caspase-3 subunit p12, Apopain, Cysteine protease CPP32 Caspase-3, CASP-3, 3.4.22.56, Apopain, Cysteine protease CPP32, CPP-32, Protein Yama, SREBP cleavage activity 1, SCA-1, Caspase-3 subunit p17, Caspase-3 subunit p12
Host Species:	Mouse
Clonality:	Monoclonal
Clone ID:	31A1067
Format:	IgG1

Target Details

Gene Name:	CASP3
Reactivity:	Human
Immunogen Type:	Recombinant Protein
Immunogen:	Caspase-3 Antibody was produced in mice by repeated immunizations with a full length recombinant Caspase-3 human protein.
Purity/Specificity:	Anti-Caspase-3 Antibody was purified by Protein G chromatography. A BLAST analysis was used to suggest cross-reactivity with Anti-Caspase-3 from Human, mouse and rat based on 100% homology with the immunizing sequence. Cross-reactivity with Anti-Caspase-3 from other sources has not been determined.
Relevant Links:	• UniProtKB - P42574 • NCBI - NP_004337.2 • GeneID - 836

Application Details

Tested Applications:	FC, IF, IHC, WB
Application Note:	Anti-Caspase 3 Antibody is tested for use in WB, EM, Flow, ICC/IF, IHC-Fr, and IHC-P. Expect a band approximately 31.5 kDa on specific lysates. The antibody detects both pro Caspase-3(32 kDa) and the large subunit of the active/cleaved form (14-21 kDa) of Caspase-3. The large subunit of the cleaved form may appear as one or two or even as a stack of bands depending on the presence or absence of the Caspase-3 pro-domain. Specific conditions for reactivity should be optimized by the end user.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
IHC:	5 µg/mL
WB:	1-5 µg/mL

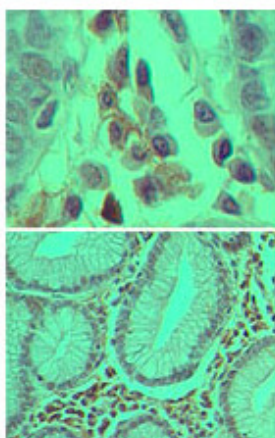
Formulation

Physical State:	Liquid
Concentration:	1.0 mg/mL by UV absorbance at 280 nm
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.02% (w/v) Sodium Azide

Shipping & Handling

Shipping Condition:	Dry Ice
Storage Condition:	Store Caspase 3 antibody at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
Expiration:	Expiration date is one (1) year from date of receipt.

Images

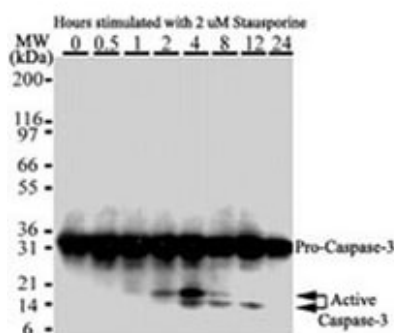


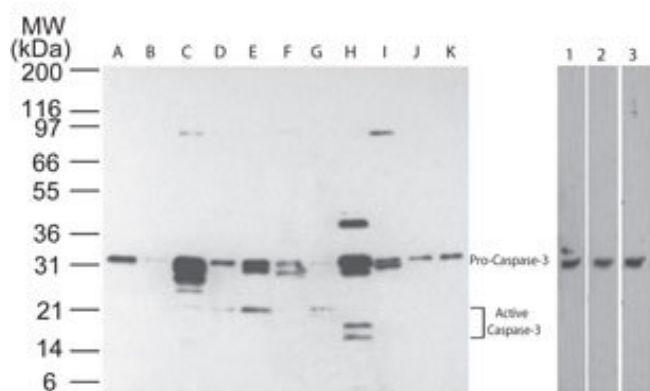
Immunohistochemistry

Immunohistochemistry of mouse Anti-Caspase-3 antibody.
 Tissue: human stomach (top image/high magnification).
 Fixation: formalin fixed paraffin embedded. Antigen retrieval: not required. Primary antibody: Caspase-3 at 5 µg/ml for 1 h at RT. Secondary antibody: Peroxidase mouse secondary antibody at 1:10,000 for 45 min at RT.
 Localization: Caspase-3 is cytoplasmic in some cells and nuclear in others. Caspase-3 in the nucleus is considered to be an indication of active caspase 3. In most cell types and model systems, cells with active caspase-3 are undergoing apoptosis. Staining: Caspase-3 has a DAB chromogen and Hematoxylin counterstain.

Western Blot

Western Blot of Mouse Anti-Caspase-3 antibody. Lane 1-8: HeLa cell lysates. Treated with 2µM staurosporine for 0, 0.5, 1, 2, 4, 8, 12, 24 hours respectively. Load: 20 µg per lane. Primary antibody: Caspase-3 antibody treated with 2 µg/ml for overnight at 4°C. Secondary antibody: IRDye800™ mouse secondary antibody at 1:10,000 for 45 min at RT. Block: 5% BLOTTO overnight at 4°C. Predicted/Observed size: 31.6 kDa for Pro-Caspase-1. Other band(s): 14-21kDa active Caspase 3. Cleavage fragments.





Western Blot

Western Blot of Mouse Anti-Caspase-3 antibody. Lane A: Human Brain. Lane B: Human Heart. C: Human Intestine. Lane D: Human Kidney. Lane E: Human Liver. Lane F: Human Lung. Lane G: Human Muscle. Lane H: Human Stomach. Lane I: Human Spleen. Lane J: Human Ovary. Lane K: Human Testis. Lane 1: human heart lysate. Lane 2: mouse heart lysate. Lane 3: rat heart lysate. Primary antibody: Caspase-3 antibody at 5 µg/ml for overnight at 4°C. Secondary antibody: IRDye800™ mouse secondary antibody at 1:10,000 for 45 min at RT. Block: 5% BLOTTO overnight at 4°C. Predicted/Observed size: 31.6 kDa for Pro-Caspase-3. Other band(s): 14-21kDa active Caspase 3.

Disclaimer

This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information. All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation. All properties listed are typical characteristics and are not specifications. All suggestions and data are offered in good faith but without guarantee as conditions and methods of use of our products are beyond our control. All claims must be made within 30 days following the date of delivery. The prospective user must determine the suitability of our materials before adopting them on a commercial scale. Suggested uses of our products are not recommendations to use our products in violation of any patent or as a license under any patent of Rockland Immunochemicals, Inc. If you require a commercial license to use this material and do not have one, then return this material, unopened to: Rockland Inc., P.O. BOX 5199, Limerick, Pennsylvania, USA.