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CDT1 Polyclonal Antibody

Catalog Number **PA5-18088**

Product data sheet

Details	
Size	100 µg
Host/Isotope	Goat / IgG
Class	Polyclonal
Type	Antibody
Immunogen	Synthetic peptide sequence (ARLAHQTRAEEGL) corresponding to the C-terminus amino acids of CDT1
Conjugate	Unconjugated
Form	Liquid
Concentration	0.5 mg/mL
Purification	Ammonium sulfate precipitation
Storage buffer	TBS, pH 7.3, with 0.5% BSA
Contains	0.02% sodium azide
Storage Conditions	-20° C, Avoid Freeze/Thaw Cycles

Species Reactivity	
Species reactivity	Human

Tested Applications	Dilution *
Western Blot (WB)	1-3 µg/mL

* 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.

Product specific information

This antibody is tested in Peptide ELISA: antibody detection limit dilution 64,000.

Background/Target Information

KMT2A is a histone methyltransferase that plays an essential role in early development and hematopoiesis. It is a catalytic subunit of the MLL1/MLL complex, a multiprotein complex that mediates both methylation of 'Lys-4' of histone H3 (H3K4me) complex and acetylation of 'Lys-16' of histone H4 (H4K16ac). In the MLL1/MLL complex, KMT2A specifically mediates H3K4me, a tag for epigenetic transcriptional activation. KMT2A has weak methyltransferase activity by itself, and requires other components of the MLL1/MLL complex to obtain full methyltransferase activity. It has no activity toward histone H3 phosphorylated on 'Thr-3', less activity toward H3 dimethylated on 'Arg-8' or 'Lys-9', and has higher activity toward H3 acetylated on 'Lys-9'. Required for transcriptional activation of HOXA9 and promotes PPP1R15A-induced apoptosis.

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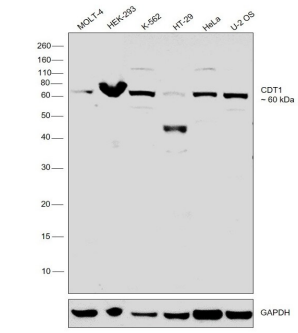
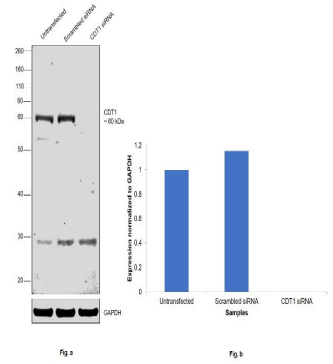
Product Images For CDT1 Polyclonal Antibody



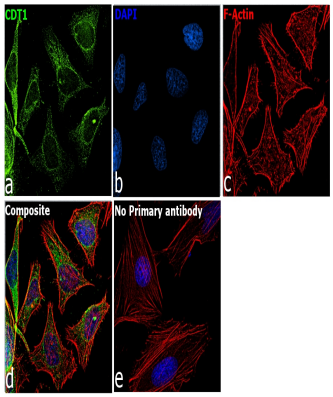
CDT1 Antibody (PA5-18088) in WB

Western blot was performed using Anti-CDT1 Polyclonal Antibody (Product # PA5-18088) and a 60 kDa band corresponding to CDT1 was observed across cell lines tested. Whole cell extracts (30 µg lysate) of MOLT-4 (Lane 1), HEK-293 (Lane 2), K-562 (Lane 3), HT-29 (Lane 4), HeLa (Lane 5) and U-2 OS (Lane 6) were electrophoresed using NuPAGE™ 4-12% Bis-Tris Protein Gel (Product # NP0322BOX). Resolved proteins were then transferred onto a nitrocellulose membrane (Product # IB23001) by iBlot® 2 Dry Blotting System (Product # IB21001). The blot was probed with the primary antibody (2 µg/mL) and detected by chemiluminescence with Rabbit anti-Goat IgG Heavy Chain Superclonal™ Secondary Antibody, HRP (Product # A27014, 1:4,000 dilution) using the iBright FL 1000 (Product # A32752). Chemiluminescent detection was performed using Novex® ECL Chemiluminescent Substrate Reagent Kit (Product # WP20005).



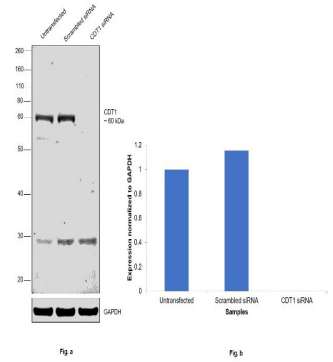
CDT1 Antibody (PA5-18088)

Antibody specificity was demonstrated by siRNA mediated knockdown of target protein. U-2 OS cells were transfected with CDT1 siRNA and reduction of signal was observed in Western Blot using CDT1 Polyclonal Antibody (Product # PA5-18088). {KD}



CDT1 Antibody (PA5-18088) in ICC/IF

Immunofluorescence analysis of CDT1 was performed using 70% confluent log phase HeLa cells. The cells were fixed with 4% paraformaldehyde for 10 minutes, permeabilized with 0.1% Triton™ X-100 for 15 minutes, and blocked with 2% BSA for 1 hour at room temperature. The cells were labeled with CDT1 Polyclonal Antibody (Product # PA5-18088) at 1:100 dilution in 0.1% BSA, incubated at 4 degree Celsius overnight and then labeled with Rabbit anti-Goat IgG (H+L) Cross-Adsorbed Secondary Antibody, Alexa Fluor® 488 conjugate (Product # A-11078) at a dilution of 1: 2000 for 45 minutes at room temperature (Panel a: green). Nuclei (Panel b: blue) were stained with ProLong™ Diamond Antifade Mountant with DAPI (Product # P36962). F-actin (Panel c: red) was stained with Rhodamine Phalloidin (Product # R415, 1:300). Panel d represents the merged image showing cytoplasmic localization. Panel e represents cells with no primary antibody to assess background. The images were captured at 60X magnification.



CDT1 Antibody (PA5-18088) in WB

Knockdown of CDT1 was achieved by transfecting U-2 OS cells with CDT1 specific siRNAs (Silencer® select Product # s37722, s37723). Western blot analysis (Fig. a) was performed using whole cell extracts from the CDT1 knockdown cells (lane 3), non-specific scrambled siRNA transfected cells (lane 2) and untransfected cells (lane 1). The blot was probed CDT1 Polyclonal Antibody (Product # PA5-18088, 2 µg/mL) and Goat anti-Rabbit IgG (Heavy Chain) Superclonal™ Secondary Antibody, HRP (Product # A27036, 1:4,000 dilution). Densitometric analysis of this western blot is shown in histogram (Fig. b). Decrease in signal upon siRNA mediated knock down confirms that antibody is specific to CDT1.

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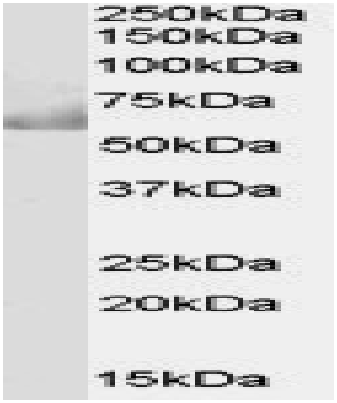

CDT1 Antibody (PA5-18088) in WB

Western blot analysis of CDT1 using CDT1 Polyclonal Antibody (Product # PA5-18088) (0.05 µg/mL) in staining of Human Ovary lysate (35 µg protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.

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