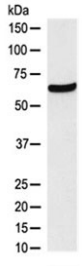
CDT1 Antibody [clone BO-3] (RQ4487)

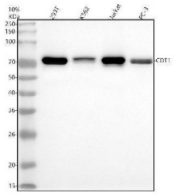
Catalog No.	Formulation	Size
RQ4487	Antibody in PBS with 0.02% sodium azide, 50% glycerol and 0.4-0.5mg/ml BSA	100 ul

Bulk quote request

Availability	1-2 weeks
Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	BO-3
Purity	Protein A affinity
UniProt	Q9H211
Applications	Western blot: 1:500-1:1000
Limitations	This CDT1 antibody is available for research use only.



CDT1 Antibody HEK293 WB. Western blot testing of human HEK293 lysate with CDT1 antibody at 0.5ug/ml. Predicted molecular weight ~60 kDa, commonly observed at 60-70 kDa.



CDT1 Antibody Human Cell Line WB. Western blot analysis of CDT1 using anti-CDT1 antibody demonstrates a distinct immunoreactive band at approximately 70 kDa in human 293T, K562, Jurkat, and PC-3 cell lysates, consistent with the expected molecular weight of Chromatin Licensing and DNA Replication Factor 1 (CDT1). CDT1 is a DNA replication licensing factor that regulates pre-replication complex assembly and ensures accurate genome duplication during cell cycle progression. The observed expression across multiple human cell lines supports the utility of this antibody for investigating DNA replication licensing, cellular proliferation, cell cycle control, and genome stability pathways. Western blot was performed using a 1:500 dilution of primary antibody. Predicted molecular weight: 60-65 kDa; commonly observed at approximately 60-70 kDa.

Description

CDT1 Antibody is designed for the detection and study of CDT1 (Chromatin Licensing and DNA Replication Factor 1), an essential component of the DNA replication licensing machinery that prepares chromosomal DNA for duplication during the cell cycle. CDT1 functions by helping establish pre-replication complexes at replication origins before DNA synthesis begins, thereby ensuring that cells accurately duplicate their genomes prior to division. This tightly controlled process is fundamental to cellular proliferation, tissue growth, and maintenance of genomic integrity.

Proper regulation of CDT1 is critical because DNA replication must occur only once during each cell cycle. To achieve this, CDT1 activity is coordinated with numerous cell cycle checkpoints and regulatory pathways that govern replication origin licensing and DNA synthesis. By controlling replication competence before S phase entry, CDT1 helps prevent genomic instability and safeguards the accurate transmission of genetic information from one generation of cells to the next.

As a key regulator of genome duplication, CDT1 is frequently studied in the context of cell cycle biology, developmental processes, stem cell maintenance, and tissue regeneration. Expression of CDT1 is often associated with actively proliferating cells, making it a valuable marker for investigations of cellular growth and division. Research involving CDT1 has contributed significantly to understanding how replication licensing pathways coordinate with broader cellular programs controlling differentiation, development, and tissue homeostasis.

Defects in CDT1 regulation can lead to inappropriate DNA replication, replication stress, chromosome instability, and activation of DNA damage response pathways. These observations have generated substantial interest in CDT1 within cancer research and studies of diseases characterized by altered cell cycle control. Investigators continue to examine how CDT1 interacts with replication licensing factors, checkpoint proteins, and genome maintenance pathways to preserve chromosomal stability under normal and pathologic conditions.

CDT1 Antibody is utilized in studies examining DNA replication licensing, genome maintenance, cellular proliferation, and cell cycle regulation. Detection of CDT1 expression can provide valuable insight into mechanisms governing chromosome duplication, proliferative activity, and maintenance of genomic stability across a wide range of biologic and disease research applications.

Learn more about CDT1 and related DNA replication control pathways on our CDT1 Antibody / DNA Replication Licensing Factor Antibody page.

Application Notes

Optimal dilution of the CDT1 antibody should be determined by the researcher.

Immunogen

A synthetic peptide from human CDT1 was used as the immunogen for the CDT1 antibody.

Storage

Store the CDT1 antibody at -20oC.

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