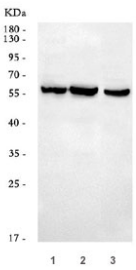
DUP Antibody / Double Parked Homolog Antibody (RQ7296)

Catalog No.	Formulation	Size
RQ7296	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human, Mouse
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity purified
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	Q9H211
Applications	Western Blot : 0.5-1ug/ml Direct ELISA : 0.1-0.5ug/ml
Limitations	This DUP Antibody / Double Parked Homolog Antibody is available for research use only.



DUP Antibody Human and Mouse WB. Western blot analysis of human MCF7, human HeLa, and mouse brain tissue lysates using DUP antibody demonstrates a distinct immunoreactive band at approximately 60-70 kDa, consistent with the expected molecular weight of Double Parked homolog (DUP/CDT1). DUP 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 both human cell lines and mouse tissue supports the utility of this antibody for investigating DNA replication licensing, cellular proliferation, chromosome maintenance, and genome stability pathways. Predicted molecular weight: ~60 kDa, commonly observed at 60-70 kDa.

Description

DUP Antibody / Double Parked Homolog Antibody is designed for the detection and study of Double Parked homolog (DUP), also known as Chromatin Licensing and DNA Replication Factor 1 (CDT1), a critical regulator of DNA replication licensing and cell cycle progression. DUP functions during the G1 phase of the cell cycle by preparing replication origins for DNA synthesis, ensuring that genomic DNA is duplicated accurately and only once during each cycle of cellular

division. Through this essential role, DUP helps maintain genome integrity and supports normal cellular proliferation, development, and tissue homeostasis.

Double Parked homolog participates in formation of the pre-replication complex through recruitment and loading of the MCM helicase complex onto chromatin. This replication licensing process establishes replication competence prior to entry into S phase and is tightly controlled by multiple regulatory pathways. Proper regulation of DUP activity is essential for preventing DNA re-replication, replication stress, and chromosomal instability, all of which can compromise genome maintenance and cellular viability.

The name Double Parked originated from genetic studies in Drosophila, where mutations affecting the corresponding gene produced characteristic defects in DNA replication and cell cycle progression. Subsequent studies established the highly conserved role of DUP/CDT1 across metazoans and highlighted its importance as a fundamental component of replication licensing machinery. Today, DUP remains an important target for investigations of chromosome duplication, genome stability, and cellular proliferation across a broad range of experimental systems.

Because DNA replication licensing is required for normal cell division, DUP expression is frequently examined in studies of developmental biology, stem cell function, regenerative processes, and cancer biology. Disruption of DUP regulation can lead to abnormal DNA replication, activation of DNA damage responses, chromosome instability, and uncontrolled cellular growth. As a result, researchers continue to investigate how DUP interacts with replication licensing factors, checkpoint proteins, and genome maintenance pathways to preserve chromosomal integrity.

DUP Antibody is useful for investigating DNA replication licensing mechanisms, cell cycle regulation, and molecular pathways controlling genome duplication. Researchers utilize DUP Antibody reagents to evaluate protein expression patterns and study biologic processes involved in cellular proliferation, chromosome maintenance, developmental regulation, and genome stability.

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 DUP Antibody / Double Parked Homolog Antibody should be determined by the researcher.

Immunogen

Recombinant human protein (amino acids R19-L357) was used as the immunogen for the DUP / CDT1 antibody.

Storage

After reconstitution, the DUP / CDT1 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

DUP Antibody, Double Parked Homolog Antibody, CDT1 Antibody, Chromatin Licensing and DNA Replication Factor 1 Antibody, DNA Replication Licensing Factor Antibody, Replication Licensing Protein Antibody, Cell Cycle Licensing Factor Antibody