

## Anti-CDC7 Kinase Antibody (5I139)

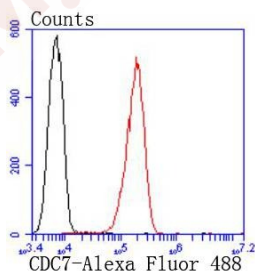
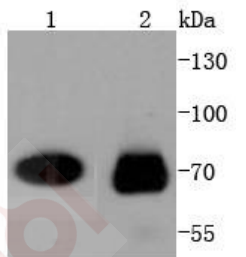
### Product Details

Ig Type:	IgG
Reactivity:	Human,Mouse,Rat
Conjugation:	Unconjugated
Molecular Weight:	Theoretical: 64 kDa.
Clone:	5I139
Purification:	ProA affinity purified

### Applications

1. Western blot analysis of CDC7 Kinase on different lysates using anti-CDC7 antibody at 1/1,000 dilution. Positive control: Lane 1: Jurkat, Lane 2: HeLa.
2. Flow cytometric analysis of A431 cells with CDC7 Kinase antibody at 1/50 dilution (red) compared with an unlabelled control (cells without incubation with primary antibody; black). Alexa Fluor 488-conjugated goat anti rabbit IgG was used as the secondary antibody.

Verified Activity:



Application:	FCM,WB
Recommended	WB: 1:1000-5000; FCM: 1:50-100

### Properties

- Stability & Storage: Store at -20°C or -80°C for 12 months. Avoid repeated freeze-thaw cycles.
- Shipping: Shipping with blue ice.

### Antigen Details

Immunogen:	Recombinant Protein
Uniprot ID:	O00311
Synonyms:	Cell division cycle 7-related protein kinase;MGC117361;MGC126237;CDC7L 1;CDC7 related kinase;huCdc7;CDC7 L1;Hsk 1;Cell division cycle 7 homolog;HsCDC 7;Cell division cycle 7 kinase;Cdc 7;Cell division cycle 7 like protein 1;CDC7L1;CDC7 cell division cycle 7;CDC7_HUMAN;Cdc7 like 1;Cell division cycle 7 related protein kinase;Hsk1;MGC126238;HuCDC 7;HsCdc7;CDC7-related kinase;CDC7 cell division cycle 7 like 1

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### Research Background

The Dbf4/Cdc7 protein kinase is essential for the activation of replication origins during S phase. Cdc7/Dbf4 efficiently phosphorylates several proteins that are required for the initiation of DNA replication, including five of the six minichromosome maintenance (Mcm) proteins and the p180 subunit of DNA polymerase  $\alpha$ -primase. This protein complex consists of the catalytic subunit Cdc7 associating with the regulatory and activating subunit Dbf4. The kinase activity of the complex is regulated throughout the cell cycle, mainly by fluctuating levels of Dbf4. Cdc7 is consistently expressed throughout the cell cycle, while the expression of Dbf4 is absent during G1 phase and accumulates during S and G2 phases. The anaphase-promoting complex rapidly degrades Dbf4 at the time of chromosome segregation, and the stability of Dbf4 remains low during pre-Start G1 phase. The coordinated degradation of Dbf4 and the time of chromosome separation is important to ensuring that prereplicative complexes, which assemble after chromosome segregation, do not immediately re-fire.

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