Cyclin Antibody Sampler Kit

HAK21050

Contains Product	Quantity	Applications	Species reactivity	MW(kDa)
Cyclin A2 [ET1612-26]	20μl	WB,IF-Cell,IF-Tissue,IHC-P	H,M,R	49 kDa
Cyclin B1 [ET1608-27]	20μl	WB,IF-Cell,IF-Tissue,IHC-P,IP	H	48 kDa
Cyclin D1 [ET1601-31]	20μl	WB,IF-Cell,IF-Tissue,IHC-P,IP,FC	H,M,R	34 kDa
Cyclin D2 [HA500325]	20μl	WB	H,M,R	33 kDa
Cyclin D3 [ET1612-4]	20μl	WB	H,M,R	33 kDa
Cyclin E1 [ET1612-16]	20μl	WB,IF-Cell,IF-Tissue,IHC-P	H	47 kDa
Cyclin E2 [HA601146]	20μl	WB,IHC-P,IF-Cell	H	47 kDa
Cyclin H [ET1611-84]	20μl	WB,IF-Cell,IF-Tissue,IHC-P,IP,FC	H,M	38 kDa
HRP-Goat Anti-Rabbit IgG (H+L) [HA1001]	100ul	WB,ELISA,IHC-P	Rab	
HRP-Goat Anti-Mouse IgG (H+L) [HA1006]	100ul	WB,ELISA,IHC-P	M	

Description: The Cyclin Antibody Sampler Kit provides an economical means of evaluating the presence of cyclin proteins in cells. The kit contains enough primary and secondary antibodies to perform two western blot experiments with each antibody.

Storage Buffer: 1*TBS (pH7.4), 0.05% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Store at +4℃ after thawing. Aliquot store at -20℃. Avoid repeated freeze / thaw cycles.

Background

Control of the cell cycle is regulated by a multitude of cellular events and processes. The cyclin dependent kinases (CDK) regulate many of these pathways and constitute an active complex when associated with their cyclin partners. This activity is controlled primarily by phosphorylation, which determines subcellular localization of the CDK/cyclin complex.

Some phosphorylation events control the function of cytoplasmic retention sequences while other events regulate nuclear localization and export sequence function. Cyclin and cyclin-dependent kinase inhibitor (CKI) levels are regulated by ubiquitination and degradation via the ubiquitin proteasome pathway. A variety of CKI proteins associate with these complexes and modulate access to regulatory domains on cyclins. Additional complexity is generated as the controlled protein levels of each cyclin oscillate with the stages of cell cycle. Increased expression of Cyclin D1 is associated with certain types of cancer and may associate with TSC2 (tuberin) independent of its Cdk partner.

Database links: UniProt ID: P20248, P51943, 13094, P14635, P24385, P25322, P39948, P30279, P30280, Q04827, P30281, P30282, P48961, P24864, Q61457, O96020, P51946, Q61458

Images

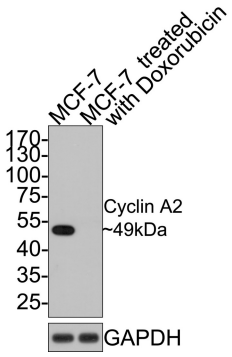

Fig1: Western blot analysis of Cyclin A2 on different lysates with Rabbit anti-Cyclin A2 antibody (ET1612-26) at 1/500 dilution.

Lane 1: MCF-7 cell lysate
Lane 2: MCF-7 treated with doxorubicin cell lysate

Lysates/proteins at 10 µg/Lane.

Predicted band size: 49 kDa
Observed band size: 49 kDa

Exposure time: 2 minutes;

10% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (ET1612-26) at 1/500 dilution was used in 5% NFDM/TBST at room temperature for 2 hours. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1:300,000 dilution was used for 1 hour at room temperature.

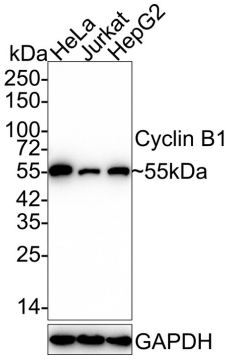

Fig2: Western blot analysis of Cyclin B1 on different lysates with Rabbit anti-Cyclin B1 antibody (ET1608-27) at 1/5,000 dilution.

Lane 1: HeLa cell lysate
Lane 2: Jurkat cell lysate
Lane 3: HepG2 cell lysate

Lysates/proteins at 15 µg/Lane.

Predicted band size: 48 kDa
Observed band size: 55 kDa

Exposure time: 3 minutes 10 seconds;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (ET1608-27) at 1/5,000 dilution was used in 5% NFDM/TBST at 4℃ overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1:50,000 dilution was used for 1 hour at room temperature.

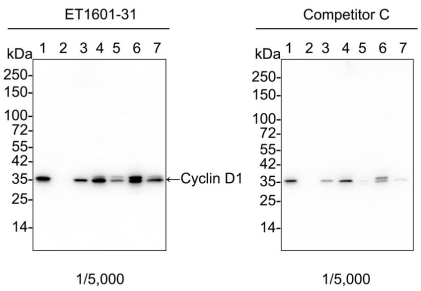

Fig3: Western blot analysis of Cyclin D1 on different lysates with Rabbit anti-Cyclin D1 antibody (ET1601-31) at 1/5,000 dilution and competitor's antibody at 1/5,000 dilution.

Lane 1: MCF7 cell lysate
Lane 2: K-562 cell lysate (negative)
Lane 3: A431 cell lysate
Lane 4: Neuro-2a cell lysate
Lane 5: NIH/3T3 cell lysate
Lane 6: C6 cell lysate
Lane 7: SH-SY5Y cell lysate

Lysates/proteins at 20 µg/Lane.

Predicted band size: 34 kDa
Observed band size: 35 kDa

Exposure time: 20 seconds;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (ET1601-31) at 1/5,000 dilution and competitor's antibody at 1/5,000 dilution were used in 5% NFDM/TBST at 4℃ overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

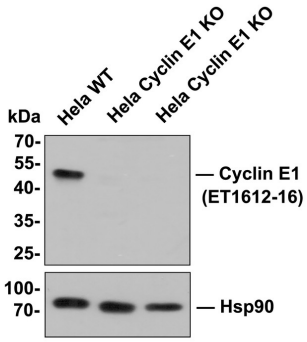

Fig4: All lanes: Western blot analysis of Cyclin E1 with anti-Cyclin E1 antibody[SD20-24] (ET1612-16) at 1:500 dilution.
Lane 1: Wild-type Hela whole cell lysate (10 µg).
Lane 2/3: Cyclin E1 knockout Hela whole cell lysate (10 µg).

ET1612-16 was shown to specifically react with Cyclin E1 in wild-type Hela cells. No bands were observed when Cyclin E1 knockout sample were tested. Wild-type and Cyclin E1 knockout samples were subjected to SDS-PAGE. Proteins were transferred to a PVDF membrane and blocked with 5% NFDM in TBST for 1 hour at room temperature. The primary antibody (ET1612-16, 1/500) was used in 5% BSA at room temperature for 2 hours. Goat Anti-Rabbit IgG-HRP Secondary Antibody (HA1001) at 1:200,000 dilution was used for 1 hour at room temperature.

Background References

1. Benzeno S, Lu F, Guo M, Barbash O, Zhang F, Herman JG, Klein PS, Rustgi A, Diehl JA. Identification of mutations that disrupt phosphorylation-dependent nuclear export of cyclin D1. Oncogene. 2006 Oct 12;25(47):6291-303.
2. Xiao Y, Dong J. Coming of Age: Targeting Cyclin K in Cancers. Cells. 2023 Aug 11;12(16):2044.