Anti-Cyclin H Antibody [SN20-48]

ET1611-84

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human, Mouse
Applications:	WB, IF-Cell, IF-Tissue, IHC-P, IP, FC
Molecular Wt:	Predicted band size: 38 kDa
Clone number:	SN20-48

Description: Progression through the cell cycle requires activation of a series of enzymes designated cyclin dependent kinases (Cdks). The monomeric catalytic subunit, Cdk2, a critical enzyme for initiation of cell cycle progression, is completely inactive. Partial activation is achieved by the binding of regulatory cyclins such as cyclin D1, while full activation requires, in addition, phosphorylation at Thr-160. The enzyme responsible for phosphorylation of Thr-160 in Cdk2 and also Thr-161 in Cdc2 p34, designated Cdk-activating kinase (CAK), has been partially purified and shown to be comprised of a catalytic subunit and a regulatory subunit. The catalytic subunit, designated Cdk7, has been identified as the mammalian homolog of MO15, a protein kinase demonstrated earlier in starfish and Xenopus. The regulatory subunit is a novel cyclin (cyclin H) and is required for activation of Cdk7. Like other Cdks, Cdk7 contains a conserved threonine required for full activity; mutation of this residue severely reduces CAK activity.

Immunogen: Recombinant protein within Human Cyclin H aa 230-323 / 323.

Positive control: K562 cell lysate, Jurkat cell lysate, Hela, MCF-7, PC-3M, mouse testis tissue, human colon cancer tissue.

Subcellular location: Nucleus.

Database links: SwissProt: P51946 Human | Q61458 Mouse

Recommended Dilutions:

WB	1:1,000-1:5,000
IF-Cell	1:100-1:500
IF-Tissue	1:100-1:500
IHC-P	1:50-1:200
FC	1:50-1:100

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℃ or -80℃. Avoid repeated freeze / thaw cycles.

Purity: Protein A affinity purified.

Images

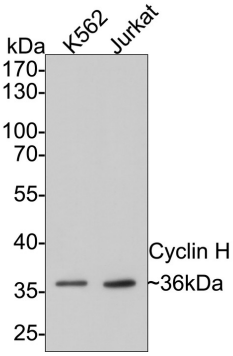

Fig1: Western blot analysis of Cyclin H on different lysates with Rabbit anti-Cyclin H antibody (ET1611-84) at 1/500 dilution.

Lane 1: K562 cell lysate
Lane 2: Jurkat cell lysate

Lysates/proteins at 10 µg/Lane.

Predicted band size: 38 kDa
Observed band size: 36 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 (ET1611-84) 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.

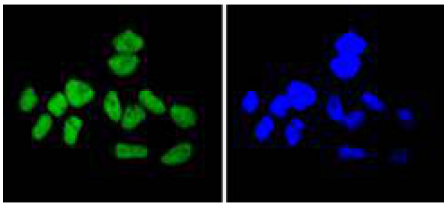

Fig2: ICC staining Cyclin H in Hela cells (green). The nuclear counter stain is DAPI (blue). Cells were fixed in paraformaldehyde, permeabilised with 0.25% Triton X100/PBS.

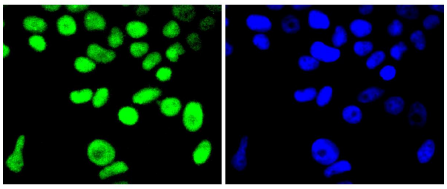

Fig3: ICC staining Cyclin H in MCF-7 cells (green). The nuclear counter stain is DAPI (blue). Cells were fixed in paraformaldehyde, permeabilised with 0.25% Triton X100/PBS.

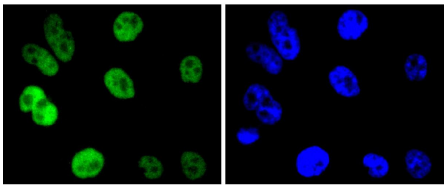

Fig4: ICC staining Cyclin H in PC-3M cells (green). The nuclear counter stain is DAPI (blue). Cells were fixed in paraformaldehyde, permeabilised with 0.25% Triton X100/PBS.

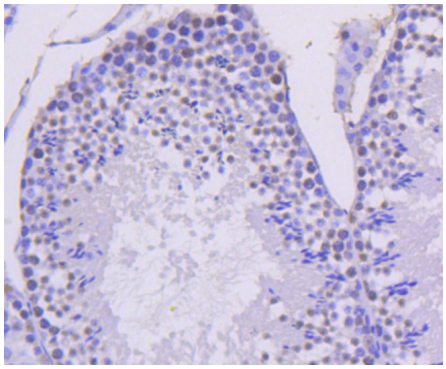

Fig5: Immunohistochemical analysis of paraffin-embedded mouse testis tissue using anti-Cyclin H antibody. Counter stained with hematoxylin.

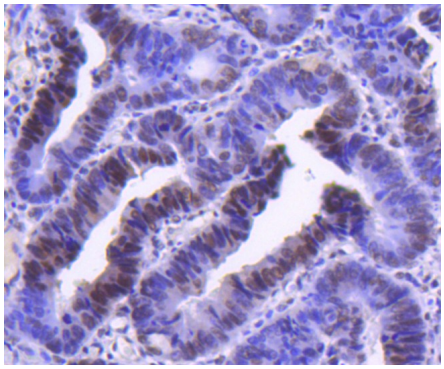

Fig6: Immunohistochemical analysis of paraffin-embedded human colon cancer tissue using anti-Cyclin H antibody. Counter stained with hematoxylin.

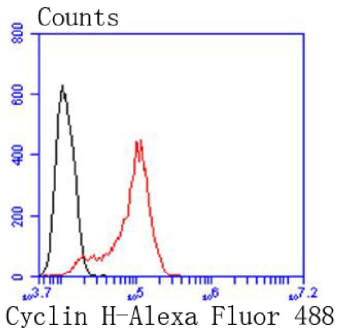

Fig7: Flow cytometric analysis of Hela cells with Cyclin H antibody at 1/50 dilution (red) compared with an unlabelled control (cells without incubation with primary antibody; black). Alexa Fluor 488-conjugated goat anti rabbit IgG was used as the secondary antibody.

Note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

Background References

1. Vashisht, AA. et al. 2015. The Association of the Xeroderma Pigmentosum Group D DNA Helicase (XPD) with Transcription Factor IIH Is Regulated by the Cytosolic Iron-Sulfur Cluster Assembly Pathway. J. Biol. Chem.. 290: 14218-25.
2. Graf, L. et al. 2013. The cyclin-dependent kinase ortholog pUL97 of human cytomegalovirus interacts with cyclins. Viruses. 5: 3213-30.