Anti-Cyclin A1+ Cyclin A2 Antibody [SD2053] ET1612-8

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human
Applications:	WB, IHC-P, IP
Molecular Wt:	52/49 kDa
Clone number:	SD2053

Description: The critical role that the family of regulatory proteins known as cyclins play in eukaryotic cell cycle regulation is well established. Cyclin A accumulates prior to cyclin B in the cell cycle, appears to be involved in control of S phase and has been shown to associate with cyclin-dependent kinase-2 (Cdk2). In addition, cyclin A has been implicated in cell transformation and is found in complexes with E1A, transcription factors DRTF1 and E2F, and retinoblastoma protein p110. A second form of cyclin A, named cyclin A1 because of its high sequence homology to Xenopus cyclin A1, is most highly expressed in germ cells. It has been proposed that cyclin A1 can associate with Cdk2, p39 and Cdc2 p34. Cyclin A2 is a member of the highly conserved cyclin family. Cyclins regulate CDK kinases and different cyclins exhibit distinct expression and degradation patterns which contribute to the temporal coordination of each mitotic event. Cyclin A2 is expressed in all tissues tested, in contrast to cyclin A1, which is present only in germ cells. The Cyclin A2 protein binds and activates CDC2 or CDK2 kinases, and thus promotes both cell cycle G1/S and G2/M transitions. Cyclin A2 also functions in the transition to DNA replication and synthesis phases of the cell cycle and is quickly destroyed as the cell moves into mitosis.

Immunogen: Recombinant protein within Human Cyclin A1 aa 253-440 / 465.

Positive control: Hela cell lysate, HepG2 cell lysate, human colon carcinoma tissue.

Subcellular location: Nucleus, Cytoplasm.

Database links: SwissProt: P20248 Human | P78396 Human

Recommended Dilutions:

WB	1:1,000-1:2,000
IHC-P	1:50-1:200

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

Storage Instruction: Shipped at 4℃. Store at +4℃ short term (1-2 weeks). It is recommended to aliquot into single-use upon delivery. Store at -20℃ long term.

Purity: Protein A affinity purified.

Images

Fig1: Western blot analysis of Cyclin A1+ Cyclin A2 on different lysates. Proteins were transferred to a PVDF membrane and blocked with 5% BSA in PBS for 1 hour at room temperature. The primary antibody (ET1612-8, 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.
Positive control:
Lane 1: Hela cell lysate
Lane 2: HepG2 cell lysate

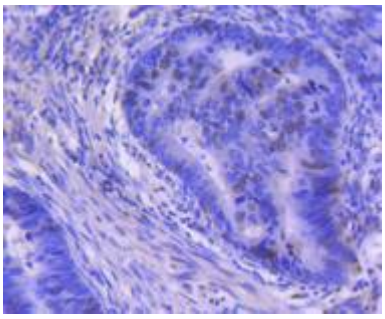

Fig2: Immunohistochemical analysis of paraffin-embedded human colon carcinoma tissue using anti-Cyclin A1+ Cyclin A2 antibody. The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 8.0-8.4) for 20 minutes.The tissues were blocked in 5% BSA for 30 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (ET1612-8, 1/50) for 30 minutes at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

Background References

1. Pakula A et al. Altered expression of cyclin A 1 in muscle of patients with facioscapulohumeral muscle dystrophy (FSHD-1). PLoS One 8:e73573 (2013).
2. Sharon E et al. Human herpesvirus 6 (HHV-6) alters E2F1/Rb pathways and utilizes the E2F1 transcription factor to express viral genes. Proc Natl Acad Sci U S A 111:451-6 (2014).