Anti-Cyclin D1 Antibody

ER0722

Product Type:	Rabbit polyclonal IgG, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	WB, IHC-P, FC
Molecular Wt:	Predicted band size: 34 kDa

Description: Cyclins function as regulators of CDKs (Cyclin-dependent kinase). Different cyclins exhibit distinct expression and degradation patterns which contribute to the temporal coordination of each mitotic event. This cyclin forms a complex with and functions as a regulatory subunit of CDK4 or CDK6, whose activity is required for cell cycle G1/S transition. Cyclin D1 has been shown to interact with tumor suppressor protein Rb and the expression of this gene is regulated positively by Rb. Mutations, amplification and overexpression of this gene, which alters cell cycle progression, are observed frequently in a variety of tumors and may contribute to tumorigenesis. Immunohistochemical staining of cyclin D1 antibodies is used to diagnose mantle cell lymphoma. Cyclin D1 has been found to be overexpressed in breast carcinoma. Its potential use as a biomarker was suggested.

Immunogen: Synthetic peptide within Mouse Cyclin D1 aa 1-50 / 295.

Positive control: Mouse brain tissue lysates, human tonsil tissue, human liver carcinoma tissue, A431.

Subcellular location: Nucleus, Cytoplasm, Nucleus membrane.

Database links: SwissProt: P24385 Human | P25322 Mouse | P39948 Rat

Recommended Dilutions:

WB	1:2,000-1:5,000
IHC-P	1:200
FC	1ug/mL

Storage Buffer: 1*PBS (pH7.4), 0.2% 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: Immunogen affinity purified.

Images

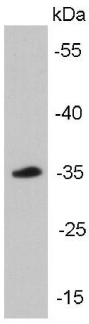

Fig1: Western blot analysis of cyclin D1 on mouse brain tissue lysates using anti-Cyclin D1 antibody at 1/5000 dilution.
Positive control: mouse brain

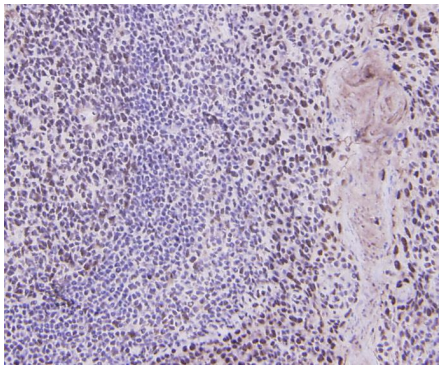

Fig2: Immunohistochemical analysis of paraffin-embedded human tonsil tissue using anti-Cyclin D1 antibody. Counter stained with hematoxylin.

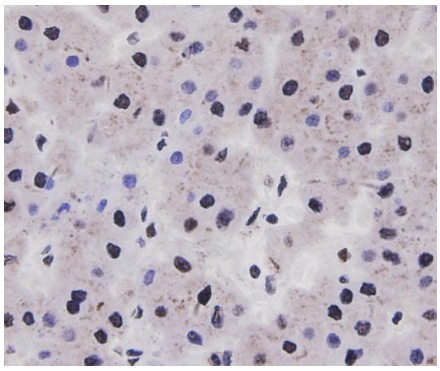

Fig3: Immunohistochemical analysis of paraffin-embedded human liver carcinoma tissue using anti-Cyclin D1 antibody. Counter stained with hematoxylin.

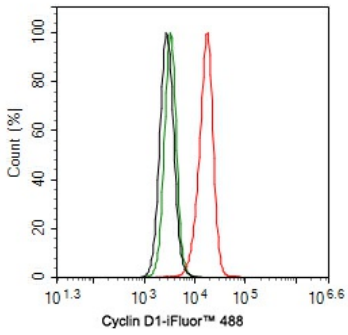

Fig4: Flow cytometric analysis of A431 cells labeling Cyclin D1.

Cells were fixed and permeabilized. Then stained with the primary antibody (ER0722, 1ug/ml) (red) compared with Rabbit IgG Isotype Control (green). After incubation of the primary antibody at +4℃ for an hour, the cells were stained with a iFluor™ 488 conjugate-Goat anti-Rabbit IgG Secondary antibody (HA1121) at 1/1,000 dilution for 30 minutes at +4℃. Unlabelled sample was used as a control (cells without incubation with primary antibody; black).

Background References

1. "Zinc finger transcription factor INSM1 interrupts cyclin D1 and CDK4 binding and induces cell cycle arrest." Zhang T., Liu W.D., Saunee N.A., Breslin M.B., Lan M.S. J. Biol. Chem. 284:5574-5581(2008)
2. "F-box protein FBXO31 mediates cyclin D1 degradation to induce G1 arrest after DNA damage." Santra M.K., Wajapeyee N., Green M.R. Nature 459:722-725(2008)
3. "An enzyme assisted RP-RPLC approach for in-depth analysis of human liver phosphoproteome." Bian Y., Song C., Cheng K., Dong M., Wang F., Huang J., Sun D., Wang L., Ye M., Zou H.J. Proteomics 96:253-262(2013)