Product datasheet

anti-Cyclin D1 mouse monoclonal, DCS-6, liquid, purified

Short overview

Cat. No.	690053
Quantity	1 ml (100 µg/ml)
Concentration	100 µg/ml (100 µg)

Product description

Host	Mouse
Antibody Type	Monoclonal
Isotype	IgG2a
Clone	DCS-6
Immunogen	Human recombinant full-length cyclin D1 protein
Formulation	0.09% sodium azide, 0.5% BSA in PBS buffer, pH 7.4
UniprotID	Q64HP0 (Dog, Canis familiaris), P24385 (Human), P25322 (Mouse), P39948 (Rat)
Synomym	G1/S-specific cyclin-D1, B-cell lymphoma 1 protein, BCL-1, BCL-1 oncogene, PRAD1 oncogene, CCND1, BCL1, PRAD1
Conjugate	Unconjugated
Purification	Affinity chromatography
Storage	Short term at 2-8°C; long term storage in aliquots at -20°C; avoid freeze/thaw cycles
Intended use	Research use only
Application	ICC/IF, IHC, WB
Reactivity	Dog, Human, Monkey, Mouse, Rat

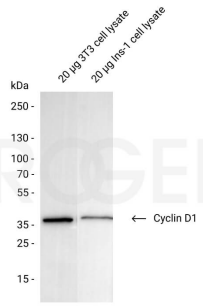
Applications

Immunocytochemistry (ICC)	Assay dependent
Immunohistochemistry (IHC) - frozen	1:20-1:50 (2-5 µg/ml)
Immunohistochemistry (IHC) - paraffin	1:20-1:50 (2-5 µg/ml, microwave treatment recommended)
Western Blot (WB)	1:50-1:100 (1-2 µg/ml)

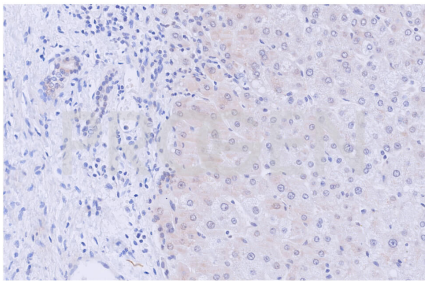
Background

DCS-6 reacts specifically with cyclin D1 protein present predominantly in G1 phase of cell cycle; it does not cross-react with D2 or D3 cyclins (the closest relatives within the cyclin family); DCS-6 is especially useful in tumor diagnosis: it can be used as fast method to identify cases with 11q13 amplifications. Cyclin D1 gene is identical to the BCL-1 and the PRAD-1 oncogene and is part of the chromosome 11q13 amplicon which is amplified in several common tumor types like breast, lung, esophagus, urinary bladder and head and neck carcinoma. Polypeptide reacting: Mr 36 kDa polypeptide (cyclin D1 polypeptide of human cells). Reactivity on cultured cell lines: MCF-7, MDA-MB-134 and MDA-MB-231 (breast cancer cell lines), UMSC22 (squamous cell carcinoma cell line), U-2-OS (osteosarcoma cell line), RT-112, A431, HT-29, 3T3-L1, Ins-1. The expression of Cyclin D1 is tissue specific and associated with tumor onset and progression.

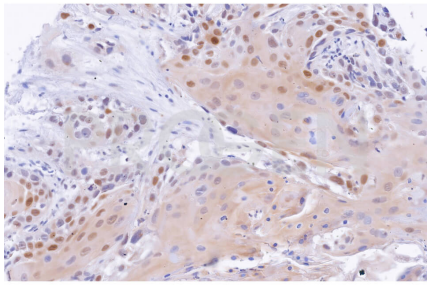
Product images



Western blot analysis of mouse 3T3-L1 and rat Ins-1 cell lysate with anti-Cyclin D1 antibody. Western blot analysis was performed on 20 µg of either 3T3 or Ins-1 lysate. Cells were lysed with RIPA buffer. The PVDF membrane was blocked with 5% dry milk in PBST (PBS + 0.1% Tween 20) for 1 h at RT. The primary antibody anti-Cyclin D1 mouse monoclonal, DCS-6 (Cat. No. 690053) was diluted in blocking buffer (antibody concentration 2 µg/ml) and incubated for 1 h at RT. The secondary antibody anti-mouse IgG goat polyclonal, HRP conjugate was also diluted in blocking buffer (antibody concentration 0.2 µg/ml) and incubated for 1 h at RT. The bands were visualized by chemiluminescent detection using PierceTM ECL Western Blotting Substrate.



IHC analysis of human liver using anti-Cyclin D1. IHC was performed on formalin fixed paraffin embedded sections. The samples were deparaffinized with xylol and ethanol followed by heat induced antigen retrieval with 10 mM citrate buffer. After preparation the tissue was blocked with normal serum for 20 min at RT. The primary antibody anti-Cyclin D1 mouse monoclonal, DCS-6 (Cat. No. 690053) was diluted in PBS (antibody concentration 2 µg/ml) and incubated at 4°C over-night. The secondary antibody ImmPRESS HRP anti-mouse IgG was incubated for 20 min at RT. Slides were incubated with DAB solution until a brown staining is visable and with Haemalaun for a few minutes. The 20x picture was acquired using microscopy (courtesy of J. Hess, University Hospital Heidelberg).



IHC analysis of head and neck squamous cell carcinoma using anti-Cyclin D1. IHC was performed on formalin fixed paraffin embedded sections. The samples were deparaffinized with xylol and ethanol followed by heat induced antigen retrieval with 10 mM citrate buffer. After preparation the tissue was blocked with normal serum for 20 min at RT. The primary antibody anti-Cyclin D1 mouse monoclonal, DCS-6 (Cat. No. 690053) was diluted in PBS (antibody concentration 2 µg/ml) and incubated at 4°C over-night. The secondary antibody ImmPRESS HRP anti-mouse IgG was incubated for 20 min at RT. Slides were incubated with DAB solution until a brown staining is visable and with Haemalaun for a few minutes. The 20x picture was acquired using microscopy (courtesy of J.Hess, University Hospital Heidelberg).

References

Publication	Species	Application
Lukas, J. et al. DNA tumor virus oncoproteins and retinoblastoma gene mutations share the ability to relieve the cellâ€™s requirement for cyclin D1 function in G1. J. Cell Biol. 125, 625â€“638 (1994).	human,monkey	WB,ICC-IF
Bartkova, J., Lukas, J., Strauss, M. & Bartek, J. Cell cycle-related variation and tissue-restricted expression of human cyclin D1 protein. J. Pathol. 172, 237â€“245 (1994).	human	WB,IHC (frozen),ICC-IF
Bartkova, J. et al. Cyclin D1 protein expression and function in human breast cancer. Int. J. Cancer 57, 353â€“361 (1994).	human	WB,IHC (paraffin),ICC-IF
Gillett, C. et al. Amplification and Overexpression of Cyclin Dl in Breast Cancer Detected by Immunohistochemical Staining. Cancer Res. 54, 1812â€“1817 (1994).	human	IHC (paraffin)
Muller, H. et al. Cyclin D1 expression is regulated by the retinoblastoma protein. Proc. Natl. Acad. Sci. 91, 2945â€“2949 (1994).	human	WB,ICC-IF