

Product datasheet

Anti-Cyclin D1 antibody ab52734

1 References

Overview

Product name	Anti-Cyclin D1 antibody
Description	Mouse polyclonal to Cyclin D1
Host species	Mouse
Tested applications	Suitable for: WB
Species reactivity	Reacts with <i>Xiphophorus maculatus</i> . (Red wagtail platy)
Immunogen	Vector coding for a partial recombinant fusion protein, corresponding to amino acids 10-104 of Cyclin D1 (<i>Xiphophorus maculatus</i>). Target sequence used to make the antibody: VDSIRRAHQD ENLLNDRVLQ TMLKAEENYL PSPNYFKCVQ KEIIPKMRKI LATWMLEVCE EQKCEEEVFP LAMNYLDRFL SVEATRCTRL QLLGA, Run BLAST with ExpASY Run BLAST with NCBI

General notes

This antibody was raised by a genetic immunization technique. Genetic immunization can be used to generate antibodies by directly delivering antigen-coding DNA into the animal, rather than injecting a protein or peptide (Tang *et al.* [PubMed: 1545867](#); Chambers and Johnston [PubMed 12910245](#); Barry and Johnston [PubMed: 9234514](#)). The animal's cells produce the protein, which stimulates the animal's immune system to produce antibodies against that particular protein. A vector coding for a partial fusion protein was used for genetic immunisation of a mouse and the resulting serum was tested in Western blot against an *E.coli* lysate containing that partial fusion protein. Genetic immunization offers enormous advantages over the traditional protein-based immunization method. DNA is faster, cheaper and easier to produce and can be produced by standard techniques readily amenable to automation. Furthermore, the antibodies generated by genetic immunization are usually of superior quality with regard to specificity, affinity and recognizing the native protein.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
Storage buffer	Constituents: 50% Glycerol, Whole serum
Purity	Whole antiserum
Primary antibody notes	This antibody was raised by a genetic immunization technique. Genetic immunization can be used to generate antibodies by directly delivering antigen-coding DNA into the animal, rather than

injecting a protein or peptide (Tang *et al.* [PubMed: 1545867](#); Chambers and Johnston [PubMed 12910245](#); Barry and Johnston [PubMed: 9234514](#)). The animal's cells produce the protein, which stimulates the animal's immune system to produce antibodies against that particular protein. A vector coding for a partial fusion protein was used for genetic immunisation of a mouse and the resulting serum was tested in Western blot against an *E.coli* lysate containing that partial fusion protein. Genetic immunization offers enormous advantages over the traditional protein-based immunization method. DNA is faster, cheaper and easier to produce and can be produced by standard techniques readily amenable to automation. Furthermore, the antibodies generated by genetic immunization are usually of superior quality with regard to specificity, affinity and recognizing the native protein.

Clonality Polyclonal
Isotype IgG

Applications

The Abpromise guarantee Our [Abpromise guarantee](#) covers the use of ab52734 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB		1/1000. This antibody has been tested in Western blot against an <i>E.coli</i> lysate containing the partial recombinant fusion protein used as an immunogen. We have no data on detection of endogenous protein.

Target

Function Essential for the control of the cell cycle at the G1/S (start) transition.

Involvement in disease Note=A chromosomal aberration involving CCND1 may be a cause of B-lymphocytic malignancy, particularly mantle-cell lymphoma (MCL). Translocation t(11;14)(q13;q32) with immunoglobulin gene regions. Activation of CCND1 may be oncogenic by directly altering progression through the cell cycle.
 Note=A chromosomal aberration involving CCND1 may be a cause of parathyroid adenomas. Translocation t(11;11)(q13;p15) with the parathyroid hormone (PTH) enhancer.
 Defects in CCND1 are a cause of multiple myeloma (MM) [MIM:254500]. MM is a malignant tumor of plasma cells usually arising in the bone marrow and characterized by diffuse involvement of the skeletal system, hyperglobulinemia, Bence-Jones proteinuria and anemia. Complications of multiple myeloma are bone pain, hypercalcemia, renal failure and spinal cord compression. The aberrant antibodies that are produced lead to impaired humoral immunity and patients have a high prevalence of infection. Amyloidosis may develop in some patients. Multiple myeloma is part of a spectrum of diseases ranging from monoclonal gammopathy of unknown significance (MGUS) to plasma cell leukemia. Note=A chromosomal aberration involving CCND1 is found in multiple myeloma. Translocation t(11;14)(q13;q32) with the IgH locus.

Sequence similarities Belongs to the cyclin family. Cyclin D subfamily.

Post-translational modifications Phosphorylation at Thr-286 by MAP kinases is required for ubiquitination and degradation following DNA damage. It probably plays an essential role for recognition by the FBXO31 component of SCF (SKP1-cullin-F-box) protein ligase complex.

Ubiquitinated, primarily as 'Lys-48'-linked polyubiquitination. Ubiquitinated by a SCF (SKP1-CUL1-F-box protein) ubiquitin-protein ligase complex containing FBXO4 and CRYAB (By similarity). Following DNA damage it is ubiquitinated by some SCF (SKP1-cullin-F-box) protein ligase complex containing FBXO31. Ubiquitination leads to its degradation and G1 arrest. Deubiquitinated by USP2; leading to stabilize it.

Cellular localization

Nucleus.

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