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Datasheet for 600-401-878

Cyclin L2 Antibody

Overview

Description:	Anti-Cyclin L2 (isoform 1) (RABBIT) Antibody - 600-401-878
Item No.:	600-401-878
Size:	100 µg
Applications:	ELISA, WB
Reactivity:	Human, Mouse
Host Species:	Rabbit

Product Details

Background:	Cyclin L (also referred to as CCNL) is encoded by two highly related genes Cyclin L1 and Cyclin L2 (CCNL1 and CCNL2, respectively). Cyclin L2 can be alternatively spliced to produce two isoforms (known as 1 and 2 or alpha and beta). The Cyclin L2 gene is located approximately 100-200 kb from the PITSLRE/CDK11 protein kinase locus in human (1p36) and in a syngenetic location on mouse chromosome 4q. Cyclin L2 is ubiquitous, expressed at much higher levels than Cyclin L1, and thus is likely the major partner for the CDK11p110 protein kinase.
Synonyms:	rabbit anti-Cyclin-L2 antibody, Cyclin L2, CCNL2, SB138, Paneth cell-enhanced expression protein, Cyclin Ania-6b, Paneth cell-enhanced expression protein, PCEE, Ania6b
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	IgG

Target Details

Gene Name:	CCNL2, SB138
Reactivity:	Human, Mouse
Immunogen Type:	Conjugated Peptide
Immunogen:	This affinity purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic polypeptide corresponding to amino acids 309-384 of Human Cyclin L2a protein.

Purity/Specificity:	This product is an affinity purified antibody produced by immunoaffinity chromatography using polypeptide coupled to agarose beads followed by solid phase adsorption(s) to remove any unwanted reactivities. This antibody is specific for human Cyclin L2a and shows negligible reactivity to Cyclin L2b or Cyclin L1 isoforms. A BLAST analysis was used to suggest reactivity with this protein from mouse based on 100% homology for the immunogen sequence. Cross reactivity with Cyclin L2a protein from rat and chicken (called Cyclin S) is expected, as this sequence shows ~ 80% homology with the protein from these sources. Cross reactivity with Cyclin L2a homologues from other sources has not been determined.
Relevant Links:	• NCBI - 14585859 • UniProtKB - Q96S94 • GeneID - 81669

Application Details

Tested Applications:	ELISA, WB
Application Note:	This affinity purified antibody has been tested for use in ELISA and western blot. Specific conditions for reactivity should be optimized by the end user. Expect a band ~ 58 kDa in size corresponding to Cyclin L2a by western blotting in the appropriate cell lysate or extract. Although not tested, this antibody is likely functional in immunohistochemistry, immunofluorescence, and immunoprecipitation.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1:2,000 - 1:10,000
IP:	1:100
WB:	1:500 - 1:3,000

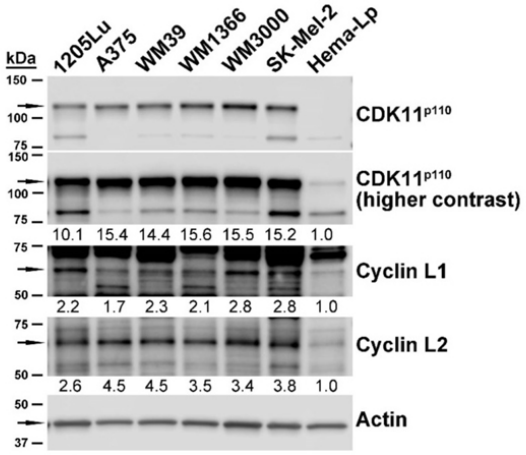
Formulation

Physical State:	Liquid (sterile filtered)
Concentration:	1.0 mg/mL by UV absorbance at 280 nm
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.01% (w/v) Sodium Azide
Stabilizer:	None

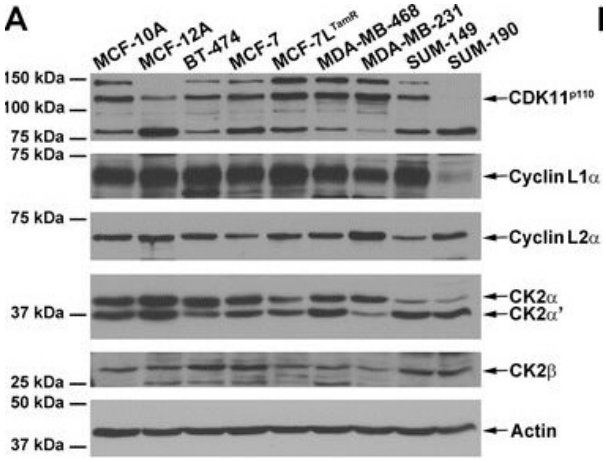
Shipping & Handling

Shipping Condition:	Dry Ice
Storage Condition:	Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
Expiration:	Expiration date is one (1) year from date of receipt.

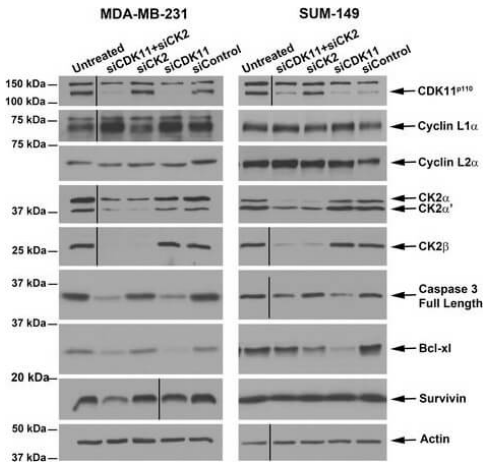
Images



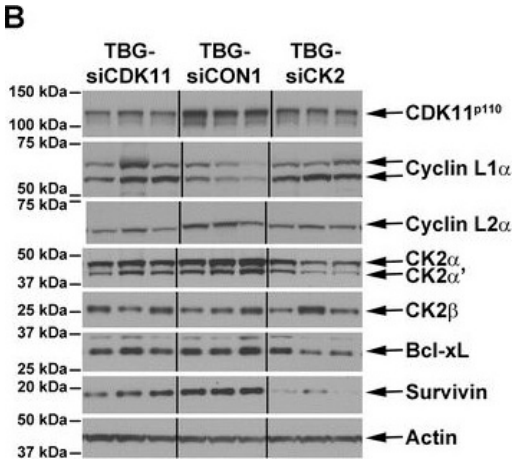
Western Blot
Expression of CDK11 protein complex members in untransformed and malignant melanocytes. Immunoblot analysis of cultured melanocyte cell lines, as indicated above the blots. Proteins detected are indicated on the right side of the blots. Arrows on the left side of blots indicate dominant protein isoform bands. Actin signal was used as the loading control. Quantitation of signal relative to actin is indicated below each protein band. Fig 1. PMID: 30987032



Western Blot
Expression of CDK11 and CK2 protein complex members in untransformed and malignant breast cells. (A) Immunoblot analysis of cultured breast cell lines, as indicated above the blots. Proteins detected are indicated on the right side of the blots. Actin signal was used as the loading control. (B) Indirect immunofluorescent detection of CDK11, CK2α, and CK2α′ (red color) in breast cell lines. Cell lines are indicated above each set of images and proteins detected are indicated on the left side of the images. Blue, 4′,6-diamidino-2-phenylindole-stained nuclei. Scale bar: 100 µm. (C) Immunohistochemical detection of CDK11 proteins in human normal and malignant breast tissue. Type of breast tissue indicated on the left side of the images. Magnification indicated above the images; dotted ellipse, portion of the 100× image that is shown at 400×. Scale bars: 400 µm for 100× and 100 µm for 400× images. (D) Human microarray tissues stained for CDK11 were scored by two independent observers. The average value was taken and the results plotted for normal (n = 16) versus triple-negative breast cancer (TNBC; n = 44) tissues. Box, first to third (Q1 to Q3) quartiles; diamond, mean; line inside box, median; whiskers, minimum and maximums of data range. CDK, cyclin-dependent kinase; CK2, casein kinase 2. Figure provided by CiteAb. Source: Breast Cancer Res, PMID: 25837326.

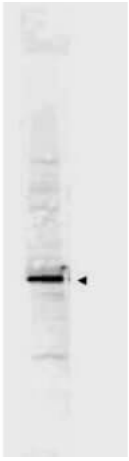


Western Blot
Immunoblot analyses following small interfering RNA-mediated downregulation of CDK11 and CK2 in breast cancer cells. Immunoblot analysis of MDA-MB-231 and SUM-149 cell lysates following small interfering RNA (siRNA) transfection. Transfected siRNAs are indicated above the blots, proteins detected are indicated on the right side of the blots. CDK11p110, cyclin L1α, cyclin L2α, and CK2αα′β lysates are 72 hours post transfection; caspase 3, Bcl-xL, and survivin lysates are 96 hours post transfection. Actin signal was used as the loading control. CDK, cyclin-dependent kinase; CK2, casein kinase 2. Figure provided by CiteAb. Source: Breast Cancer Res, PMID: 25837326.



Western Blot

Analysis for RNA-induced silencing complex cleavage products in treated tumors and immunoblot analysis for target protein complexes and death signals in primary tumors. (A) Total RNA was isolated from tumor tissue and used for 5' ligation-mediated RACE to determine whether RNA-induced silencing complex (RISC)-mediated cleavage of the transcript occurred. The predicted RACE products are indicated to the right, the size (base pairs (bp)) of the DNA standards shown on the left, and the treatment administered indicated above the lanes. (B) Immunoblot analysis of MDA-MB-231 day 10 tumor lysates following intravenous treatments of 0.01 mg/kg TBG-siCDK11, TBG-siCK2, or TBG-siCON1 as indicated above the blots. The signals for three mice per group are shown and the proteins detected are indicated on the right side of the blots. Actin signal was used as the loading control. (C) The protein signals from all mice in each treatment group were quantitated by densitometry using ImageJ software (National Institutes of Health Bethesda, MD, USA). Data presented as mean ± standard error. *P <0.05, **P <0.01. CDK, cyclin-dependent kinase; CK2, casein kinase 2; si, small interfering; TBG, tenfibgen. Figure provided by CiteAb.
Source: Breast Cancer Res, PMID: 25837326.



Western Blot

Western blot using Rockland's Affinity Purified anti-Cyclin L2a antibody shows detection of a band ~38 kDa corresponding to a GST-truncated human Cyclin L2a fusion protein (arrowhead). Approximately 5 ul of an induced E.coli cell lysate expressing recombinant Cyclin L2 was separated by 4-20% SDS-PAGE followed by transfer to nitrocellulose. After blocking the membrane was probed with the primary antibody diluted to 1:1,000 overnight at 4°C followed by washes and reaction with a 1:10,000 dilution of IRDye800 conjugated Gt-a-Rabbit IgG [H&L] MX (611-132-122) for 45 min at room temperature. IRDye800 fluorescence image was captured using the Odyssey® Infrared Imaging System developed by LI-COR. IRDye is a trademark of LI-COR, Inc. Other detection systems will yield similar results.

References

- Ahmed RL et al. CDK11 loss induces cell cycle dysfunction and death of BRAF and NRAS melanoma cells. *Pharmaceuticals (Basel).* (2019)
- Kren et al. Preclinical evaluation of cyclin dependent kinase 11 and casein kinase 2 survival kinases as RNA interference targets for triple negative breast cancer therapy. *Breast Cancer Research* (2015)

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