

Product datasheet

Anti-CDKAL1 antibody ab74020

★★★★☆ 3 Abreviews 1 References 4 Images

Overview

Product name	Anti-CDKAL1 antibody
Description	Rabbit polyclonal to CDKAL1
Host species	Rabbit
Tested applications	Suitable for: ICC/IF, WB, IHC-P
Species reactivity	Reacts with: Mouse, Human
Immunogen	Synthetic peptide conjugated to KLH derived from within residues 250 - 350 of Human CDKAL1. Read Abcam's proprietary immunogen policy (Peptide available as ab74019 .)
Positive control	This antibody gave a positive signal in the following whole cell lysates: HepG2, Jurkat, Raji and SK N BE. This antibody gave a positive result when used in the following formaldehyde fixed cell lines: PANC-1.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.
Storage buffer	Preservative: 0.02% Sodium Azide Constituents: 1% BSA, PBS, pH 7.4
Purity	Immunogen affinity purified
Clonality	Polyclonal
Isotype	IgG

Applications

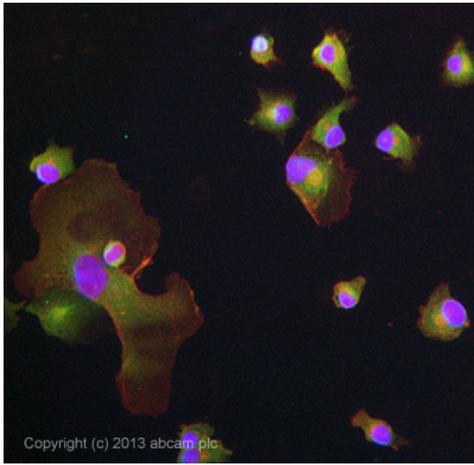
Our [Abpromise guarantee](#) covers the use of **ab74020** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

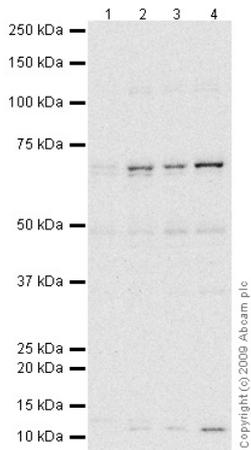
Application	Abreviews	Notes
ICC/IF		

Application	Abreviews	Notes
WB	★☆☆☆☆	
IHC-P	★★★★☆	
Application notes	<p>ICC/IF: Use at a concentration of 5 µg/ml.</p> <p>WB: Use at a concentration of 1 µg/ml. Detects a band of approximately 65 kDa (predicted molecular weight: 65 kDa).</p> <p>Not yet tested in other applications.</p> <p>Optimal dilutions/concentrations should be determined by the end user.</p>	
Target		
Function	Catalyzes the methylthiolation of N6-threonylcarbamoyladenosine (t(6)A), leading to the formation of 2-methylthio-N6-threonylcarbamoyladenosine (ms(2)t(6)A) at position 37 in tRNAs that read codons beginning with adenine.	
Tissue specificity	Expressed in pancreatic islets.	
Involvement in disease	Genetic variations in CDKAL1 are a cause of susceptibility to diabetes mellitus, non-insulin-dependent (NIDDM) [MIM:125853]. A multifactorial disorder of glucose homeostasis caused by a lack of sensitivity to the body's own insulin. Affected individuals usually have an obese body habitus and manifestations of a metabolic syndrome characterized by diabetes, insulin resistance, hypertension and hypertriglyceridemia. The disease results in long-term complications that affect the eyes, kidneys, nerves, and blood vessels.	
Sequence similarities	<p>Belongs to the methylthiotransferase family. CDKAL1 subfamily.</p> <p>Contains 1 MTTase N-terminal domain.</p> <p>Contains 1 TRAM domain.</p>	
Cellular localization	Endoplasmic reticulum membrane. Is a tail-anchored protein that exploits the TCR40 pathway for insertion into the endoplasmic reticulum.	

Images



Immunocytochemistry/ Immunofluorescence - Anti-CDKAL1 antibody (ab74020)



Western blot - Anti-CDKAL1 antibody (ab74020)

ICC/IF image of ab74020 stained PANC-1 cells. The cells were 4% formaldehyde fixed (10 min) and then incubated in 1%BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1h to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody ab74020 at 5µg/ml overnight at +4°C. The secondary antibody (green) was DyLight® 488 goat anti- rabbit (ab96899) IgG (H+L) used at a 1/250 dilution for 1h. Alexa Fluor® 594 WGA was used to label plasma membranes (red) at a 1/200 dilution for 1h. DAPI was used to stain the cell nuclei (blue) at a concentration of 1.43µM.

All lanes : Anti-CDKAL1 antibody (ab74020) at 1 µg/ml

Lane 1 : HepG2 (Human hepatocellular liver carcinoma cell line) Whole Cell Lysate

Lane 2 : Jurkat (Human T cell lymphoblast-like cell line) Whole Cell Lysate

Lane 3 : Raji (Human Burkitt's lymphoma cell line) Whole Cell Lysate

Lane 4 : SK N BE (Human neuroblastoma) Whole Cell Lysate

Lysates/proteins at 10 µg per lane.

Secondary

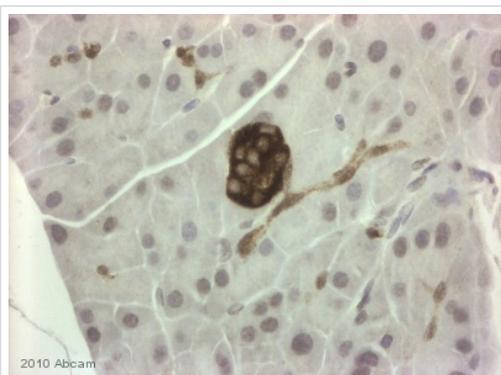
All lanes : Goat polyclonal to Rabbit IgG - H&L - Pre-Adsorbed (HRP) at 1/3000 dilution

Performed under reducing conditions.

Predicted band size: 65 kDa

Observed band size: 65 kDa

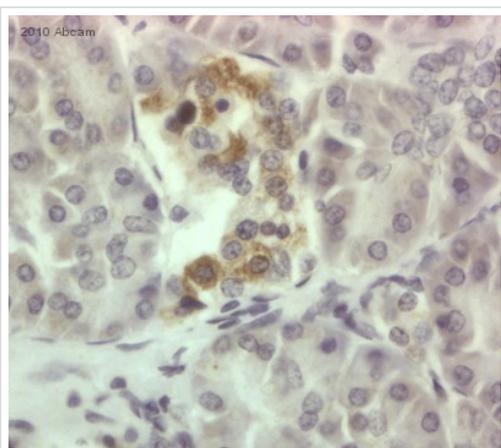
Exposure time: 8 minutes



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CDKAL1 antibody (ab74020)

This image is a courtesy of Abreview submitted by Antibody Solutions Ltd

ab74020 staining CDKAL1 in mouse pancreatic tissue sections by Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections). Tissue underwent fixation in formaldehyde, heat mediated antigen retrieval and blocking (5 minutes/peroxidase block and 10 minutes/protein block) for 45 minutes at 20⁰C. The primary antibody was diluted 1/250 and incubated with the sample for 45 minutes at 20⁰C. A HRP conjugated goat polyclonal to rabbit IgG was used undiluted as secondary antibody.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CDKAL1 antibody (ab74020)

This image is a courtesy of Abreview submitted by Antibody Solutions Ltd

ab74020 staining CDKAL1 in human pancreatic tissue sections by Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections). Tissue underwent fixation in formaldehyde, heat mediated antigen retrieval and blocking (5 minutes/peroxidase block and 10 minutes/protein block) for 15 minutes at 20⁰C. The primary antibody was diluted 1/250 and incubated with the sample for 45 minutes at 20⁰C. A HRP polymer conjugated goat polyclonal to rabbit IgG was used undiluted as secondary antibody.

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