

Datasheet for ABIN968073  
**anti-PRKAR2B antibody (AA 1-418)**

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## Overview

Quantity:	150 µg
Target:	PRKAR2B
Binding Specificity:	AA 1-418
Reactivity:	Human, Mouse, Rat, Dog, Chicken
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This PRKAR2B antibody is un-conjugated
Application:	Western Blotting (WB), Immunohistochemistry (IHC), Immunofluorescence (IF), Immunoprecipitation (IP)

## Product Details

Immunogen:	Human PKA RIIBeta, aa 1-418
Clone:	45
Isotype:	IgG1
Cross-Reactivity:	Chicken, Dog (Canine), Mouse (Murine), Rat (Rattus)
Characteristics:	<ol style="list-style-type: none"><li>1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.</li><li>2. Please refer to us for technical protocols.</li><li>3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.</li><li>4. Source of all serum proteins is from USDA inspected abattoirs located in the United States.</li></ol>

## Product Details

Purification:	The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.
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## Target Details

Target:	PRKAR2B
Alternative Name:	PKA RIIBeta ( <a href="#">PRKAR2B Products</a> )
Background:	<p>CAMP-dependent Protein Kinase (PKA) is composed of two distinct subunits: catalytic (C) and regulatory (R). Four regulatory subunits have been identified: RIalpha, RIβ, RIIfalpha, and RIIBβ. These subunits define type I and II cAMP-dependent protein kinases. Following binding of cAMP, the regulatory subunits dissociate from the catalytic subunits, rendering the enzyme active. Type I and type II holoenzymes have three potential C subunits (Calpha, Cβ, or Cgamma). Type II PKA can be distinguished by autophosphorylation of the R-subunits, while type I PKA binds Mg/ATP with high affinity. Most cells express both type I and type II PKAs. Although the RIalpha isoforms are ubiquitously expressed, the RIβ isoforms are predominant in nervous and adipose tissues. There are indications that the deletion of the gene for PKA RIIBβ results in lack of long-term potentiation in a select group of hippocampal cells, suggesting an important role for this protein in the neurosciences.</p>
Molecular Weight:	53 kDa
Pathways:	<a href="#">Hedgehog Signaling</a> , <a href="#">EGFR Signaling Pathway</a> , <a href="#">Neurotrophin Signaling Pathway</a> , <a href="#">Myometrial Relaxation and Contraction</a> , <a href="#">M Phase</a> , <a href="#">G-protein mediated Events</a> , <a href="#">Interaction of EGFR with phospholipase C-gamma</a> , <a href="#">SARS-CoV-2 Protein Interactome</a> , <a href="#">The Global Phosphorylation Landscape of SARS-CoV-2 Infection</a>

## Application Details

Application Notes:	<p>Methanol Procedure for a 96 well plate: Remove media from wells. Add 100 µl/well fresh 3.7% Formaldehyde in PBS. Incubate for 10 minutes at room temperature (RT). Flick out and add 100 µl/well 90% methanol. Incubate for 5 minutes at RT. Flick out and wash twice with PBS. Flick out PBS and add 100 µl/well blocking buffer (3% FBS in PBS). Incubate for 30 minutes at RT. Flick out and add diluted antibody (diluted in blocking buffer). Incubate for 1 hour at RT. Wash three times with PBS. Flick out PBS and add second step reagent. Incubate for 1 hour at RT. Wash three times with PBS.</p> <p>Triton-X 100 Procedure for a 96 well plate: Remove media from wells. Add 100 µl/well fresh 3.7% Formaldehyde in PBS. Incubate for 10 minutes at room temperature (RT). Flick out and</p>
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## Application Details

add 100 µl/well 0.1% Triton-X 100. Incubate for 5 minutes at RT. Flick out and wash twice with PBS. Flick out PBS and add 100 µl/well blocking buffer (3% FBS in PBS). Incubate for 30 minutes at RT. Flick out and add diluted antibody (diluted in blocking buffer). Incubate for 1 hour at RT. Flick out and wash three times with PBS. Flick out and add second step reagent. Incubate for 1 hour at RT. Flick out and wash three times with PBS.

Comment: Related Products: ABIN967389

Restrictions: For Research Use only

## Handling

Format: Liquid

Concentration: 250 µg/mL

Buffer: Aqueous buffered solution containing BSA, glycerol, and ≤0.09 % sodium azide.

Preservative: Sodium azide

Precaution of Use: This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.

Storage: -20 °C

Storage Comment: Store undiluted at -20° C.

## Publications

Product cited in: Tavalin, Colledge, Hell, Langeberg, Huganir, Scott: "Regulation of GluR1 by the A-kinase anchoring protein 79 (AKAP79) signaling complex shares properties with long-term depression." in: **The Journal of neuroscience : the official journal of the Society for Neuroscience**, Vol. 22, Issue 8, pp. 3044-51, (2002) ([PubMed](#)).

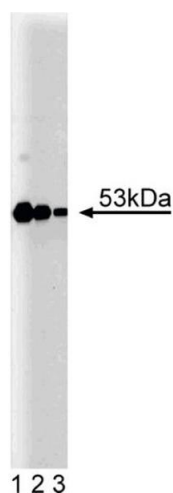
Taskén, Collas, Kemmner, Witczak, Conti, Taskén: "Phosphodiesterase 4D and protein kinase a type II constitute a signaling unit in the centrosomal area." in: **The Journal of biological chemistry**, Vol. 276, Issue 25, pp. 21999-2002, (2001) ([PubMed](#)).

Casey, Vaughan, He, Hatcher, Winter, Weremowicz, Montgomery, Kucherlapati, Morton, Basson: "Mutations in the protein kinase A R1alpha regulatory subunit cause familial cardiac myxomas and Carney complex." in: **The Journal of clinical investigation**, Vol. 106, Issue 5, pp. R31-8, (2000) ([PubMed](#)).

Skålhegg, Landmark, Foss, Lohmann, Hansson, Lea, Jahnsen: "Identification, purification, and characterization of subunits of cAMP-dependent protein kinase in human testis. Reverse mobilities of human RII alpha and RII beta on sodium dodecyl sulfate-polyacrylamide gel electrophoresis compared with rat and bovine R" in: **The Journal of biological chemistry**, Vol. 267, Issue 8, pp. 5374-9, (1992) ([PubMed](#)).

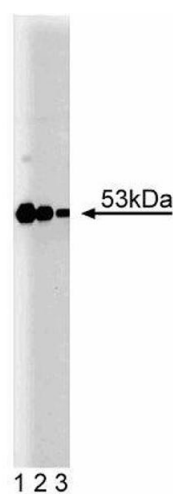
Sandberg, Skålhegg, Jahnsen: "The two mRNA forms for the type I alpha regulatory subunit of cAMP-dependent protein kinase from human testis are due to the use of different polyadenylation site signals." in: **Biochemical and biophysical research communications**, Vol. 167, Issue 1, pp. 323-30, (1990) ([PubMed](#)).

## Images



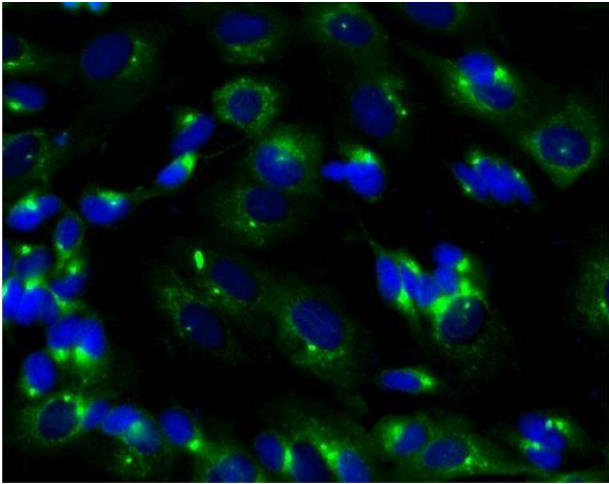
### Western Blotting

**Image 1.**



### Western Blotting

**Image 2.** Western blot analysis of PKA RIIbeta on human endothelial lysate (left). Lane 1: 1:1000, lane 2: 1:2000, lane 3: 1:4000 dilution of PKA RIIbeta.



#### Immunofluorescence

**Image 3.** Immunofluorescent staining of SK-N-SH cells (right). Cells were seeded in a 384 well collagen coated Microplates at ~ 8,000 cells per well. After overnight incubation, cells were stained using the Triton X100 fix/perm protocol and the anti- PKARIIb antibody. The second step reagent was Alexa Fluor® 488 goat anti mouse Ig (Invitrogen). The image was taken on a Pathway 855 or 435 imager using a 20x objective. This antibody also stained SH-SY5Y and C6 cells using both the Triton X100 and methanol fix/perm protocols.

Please check the [product details page](#) for more images. Overall 5 images are available for ABIN968073.