Product Name: KD-Validated PRKAR2A Recombinant Rabbit Monoclonal Antibody
Catalog #: KVAb00932
For research use only.

Summary

Description	KO&KD-Validated antibody
Host	Rabbit
Application	WB,FCM,ICC,IHC-P
Reactivity	Human
Conjugation	Unconjugated
Modification	Unmodified
Isotype	Rabbit IgG
Clonality	Rabbit mAb
Form	Liquid
Storage	Aliquot and store at -20°C (valid for 12 months). Avoid freeze/thaw cycles.
Shipping	Ice bags
Buffer	Supplied in PBS (pH 7.4) containing 50% glycerol, and 0.02% sodium azide.
Purification	Affinity purification

Application

Dilution Ratio	WB 1:1,000-1:5,000; FC 1:200-1:2,000; ICC 1:100-1:1,000; IHC-P 1:100-1:200
Molecular Weight	Calculated MW: 45.5kDa

Antigen Information

Gene Name	PRKAR2A
Alternative Names	Protein Kinase CAMP-Dependent Type II Regulatory Subunit Alpha; PRKAR2; Protein Kinase, CAMP-Dependent, Regulatory Subunit Type II Alpha; CAMP-Dependent Protein Kinase Type II-Alpha Regulatory Subunit; PKR2; Protein Kinase, CAMP-Dependent, Regulatory, Type II, Alpha; CAMP-Dependent Protein Kinase Regulatory Subunit RII Alpha; Protein Kinase A, RII-Alpha Subunit
Gene ID	5576.0
SwissProt ID	P13861
Immunogen	A synthesized peptide derived from human PKA R2

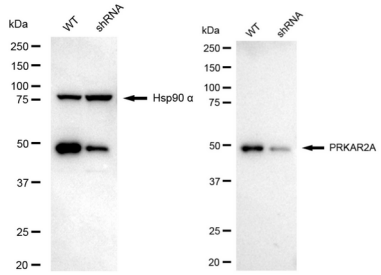
Background

cAMP is a signaling molecule important for a variety of cellular functions. cAMP exerts its effects by activating the cAMP-dependent protein kinase, which transduces the signal through phosphorylation of different target proteins. The inactive kinase holoenzyme is a tetramer composed of two regulatory and two catalytic subunits. cAMP causes the dissociation of the inactive holoenzyme into a dimer of regulatory subunits bound to four cAMP and two free monomeric catalytic subunits. Four different regulatory subunits and three catalytic subunits have been identified in humans. The protein encoded by this gene is one of the regulatory subunits. This subunit can be phosphorylated by the activated catalytic subunit. It may interact with various A-kinase anchoring proteins and determine the subcellular localization of cAMP-dependent protein kinase. This subunit has been shown to regulate protein transport from endosomes to the Golgi apparatus and further to the endoplasmic reticulum (ER). [provided by RefSeq, Jul 2008]

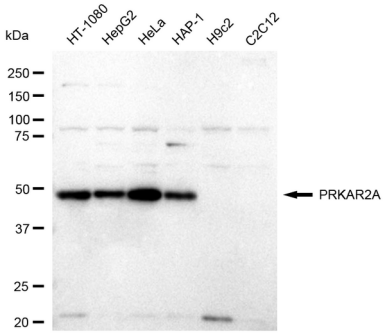
Research Area

Signal Transduction,Cancer,Metabolism

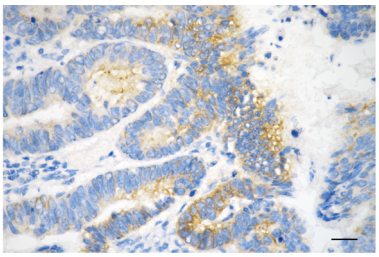
Image Data



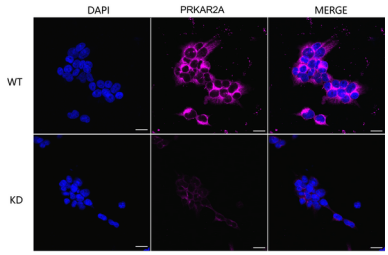
Western blotting analysis using PRKAR2A antibody (KVAb00932). PRKAR2A expression in wild-type (WT) and PRKAR2A shRNA knockdown (KD) HeLa cells with 20 µg of total cell lysates. Hsp90 α serves as a loading control. The blot was incubated with PRKAR2A antibody (KVAb00932, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody (APS0635, 1:10,000) respectively.



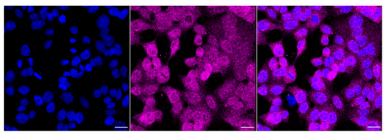
Western blotting analysis using PRKAR2A antibody (KVAb00932). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with PRKAR2A antibody (KVAb00932, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody (APS0635, 1:10,000) respectively.



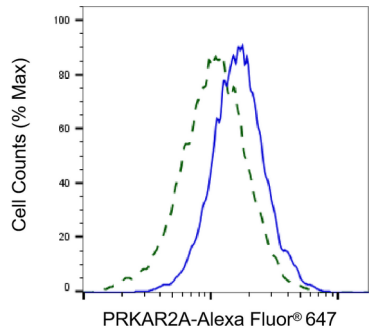
Immunohistochemistry was performed on paraffin-embedded human sigmoid colon carcinoma using PRKAR2A antibody (KVAb00932, 1:200). Antigen retrieval was done in sodium citrate buffer (pH 6.0). DAB was used for detection, with hematoxylin counterstaining. Images were acquired using a Nikon Ci-L Plus microscope (40× objective). Scale bar: 25 µm.



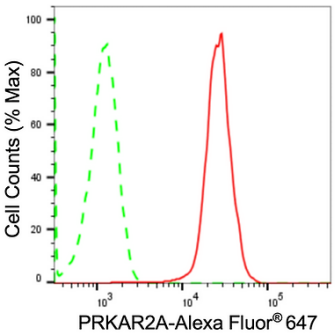
Immunocytochemical staining of HeLa cells using PRKAR2A antibody (KVAb00932, 1:1,000), Top panel: wild-type (WT); Bottom panal: PRKAR2A shRNA knockdown (KD). Nuclei were stained blue with DAPI; PRKAR2A was stained magenta with Alexa Fluor® 647. Scale bar, 20 μm. Permeabilization: Triton.



Immunocytochemical staining of HAP-1 cells with PRKAR2A antibody (KVAb00932, 1:1,000). Nuclei were stained blue with DAPI; PRKAR2A was stained magenta with Alexa Fluor® 647. Images were taken using Leica stellaris 5. Protein abundance based on laser Intensity and smart gain: Medium. Scale bar, 20 μm.



Validation of PRKAR2A knockdown using flow cytometry. Wild-type(WT, Blue) and knockdown(KD, Green) HeLa cells were stained with PRKAR2A antibody (KVAb00932, 1:2,000) and analyzed using BD flow cytometer.



Flow cytometric analysis of PRKAR2A expression in HAP-1 cells using PRKAR2A antibody (KVAb00932, 1:2,000). Green, isotype control; red, PRKAR2A.