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Product datasheet for CF501106

PKA R2 (PRKAR2A) Mouse Monoclonal Antibody [Clone ID: OTI1C4]

Product data:

Product Type:	Primary Antibodies
Clone Name:	OTI1C4
Applications:	FC, IF, IHC, WB
Recommended Dilution:	WB 1:2000, IHC 1:50, IF 1:100, Flow: 1:100
Reactivity:	Human, Mouse, Rat
Host:	Mouse
Isotype:	IgG1
Clonality:	Monoclonal
Immunogen:	Full length human recombinant protein of human PRKAR2A (NP_004148) produced in HEK293T cell.
Formulation:	Lyophilized powder (original buffer 1X PBS, pH 7.3, 8% trehalose)
Reconstitution Method:	For reconstitution, we recommend adding 100uL distilled water to a final antibody concentration of about 1 mg/mL. To use this carrier-free antibody for conjugation experiment, we strongly recommend performing another round of desalting process. (OriGene recommends Zeba Spin Desalting Columns, 7KMWCO from Thermo Scientific)
Purification:	Purified from mouse ascites fluids or tissue culture supernatant by affinity chromatography (protein A/G)
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Predicted Protein Size:	45.3 kDa
Gene Name:	protein kinase cAMP-dependent type II regulatory subunit alpha
Database Link:	NP_004148 Entrez Gene 19087 MouseEntrez Gene 29699 RatEntrez Gene 5576 Human P13861

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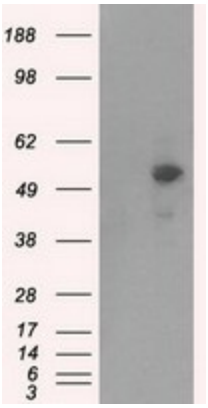
Background: cAMP is a signaling molecule important for a variety of cellular functions. cAMP exerts its effects by activating the cAMP-dependent protein kinase, which transduces the signal through phosphorylation of different target proteins. The inactive kinase holoenzyme is a tetramer composed of two 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).

Synonyms: PKR2; PRKAR2

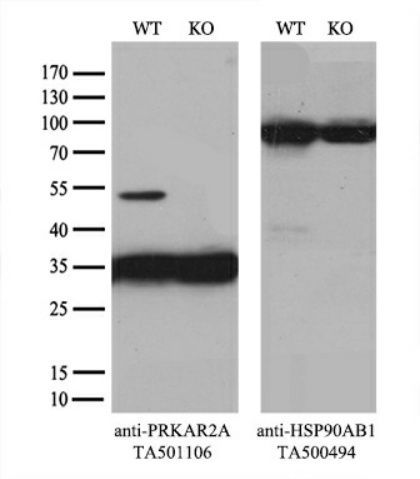
Protein Families: Druggable Genome

Protein Pathways: Apoptosis, Insulin signaling pathway

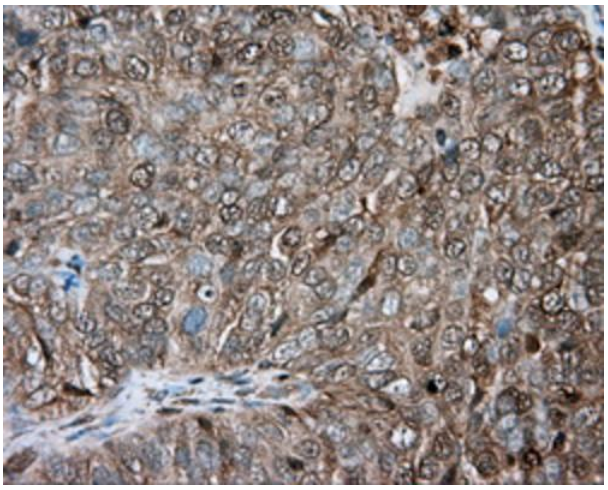
Product images:



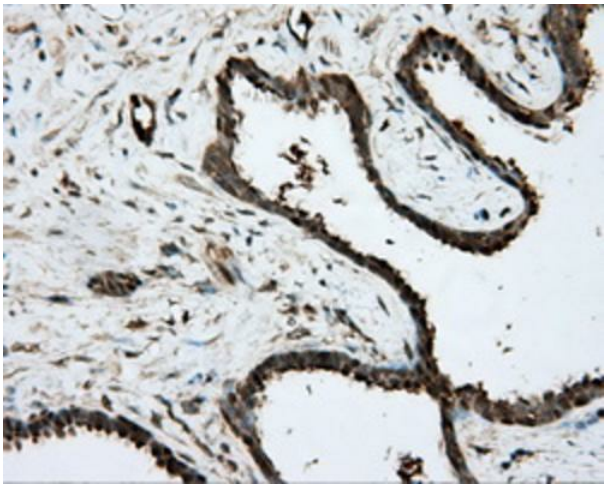
HEK293T cells were transfected with the pCMV6-ENTRY control (Left lane) or pCMV6-ENTRY PRKAR2A ([RC220376], Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-PRKAR2A. Positive lysates [LY401337] (100ug) and [LC401337] (20ug) can be purchased separately from OriGene.



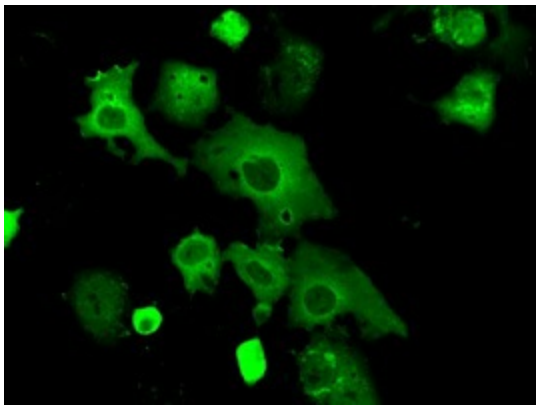
Equivalent amounts of cell lysates (10 ug per lane) of wild-type HeLa cells (WT, Cat# LC810HELA) and PRKAR2A-Knockout HeLa cells (KO, Cat# [LC812853]) were separated by SDS-PAGE and immunoblotted with anti-PRKAR2A monoclonal antibody [TA501106] (1:2000`). Then the blotted membrane was stripped and reprobed with anti-HSP90 antibody as a loading control.



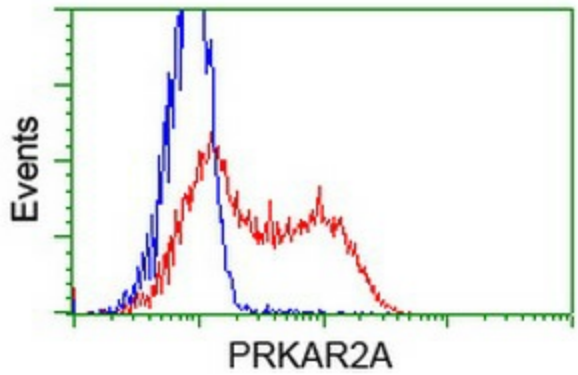
Immunohistochemical staining of paraffin-embedded Adenocarcinoma of ovary tissue using anti-PRKAR2A mouse monoclonal antibody. (Heat-induced epitope retrieval by 10mM citric buffer, pH6.0, 100°C for 10min, [TA501106], Dilution 1:50)



Immunohistochemical staining of paraffin-embedded Carcinoma of prostate tissue using anti-PRKAR2A mouse monoclonal antibody. (Heat-induced epitope retrieval by 10mM citric buffer, pH6.0, 100°C for 10min, [TA501106], Dilution 1:50)



Anti-PRKAR2A mouse monoclonal antibody ([TA501106]) immunofluorescent staining of COS7 cells transiently transfected by pCMV6-ENTRY PRKAR2A ([RC220376]).



HEK293T cells transfected with either [RC220376] overexpress plasmid (Red) or empty vector control plasmid (Blue) were immunostained by anti-PRKAR2A antibody ([TA501106]), and then analyzed by flow cytometry.