

Rabbit Anti-PRKAR2A antibody

SL55176R

Product Name [KO validated anti] PRKAR2A

Chinese Name 蛋白激酶 A 受体 2 α 亚基抗体

Alias

KAP2; KAP2_HUMAN; MGC3606; PKR 2; PKR2; PRKA R2; PRKAR 2; PRKAR2; Protein kinase A RII alpha subunit; Protein kinase cAMP dependent regulatory type II alpha; cAMP dependent protein kinase regulatory subunit alpha 2; cAMP dependent protein kinase regulatory subunit RII alpha; cAMP dependent protein kinase type II alpha regulatory chain; cAMP dependent protein kinase type II alpha regulatory subunit; cAMP-dependent protein kinase type II-alpha regulatory subunit.

Research Area

Tumour Cell biology immunology transcriptional regulatory factor

Immunogen Species

Rabbit

Clonality

Polyclonal

React Species

Human, Mouse, Rat,

WB=1:500-2000,ICC/IF=1:50 - 1:200,ELISA=1:5000-10000

Applications

not yet tested in other applications.

optimal dilutions/concentrations should be determined by the end user.

Theoretical molecular weight

49kDa

Cellular localization

cytoplasmic The cell membrane

Form

Liquid

Concentration

1mg/ml

immunogen

Recombinant human PRKAR2A: 1-404/404

Lsotype

IgG

Purification

affinity purified by Protein A

Buffer

Solution

1M TBS(pH7.4) with 1% BSA, 3% Proclin300 and 50% Glycerol.

Storage

Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 1M PBS or diluent of antibody the antibody

is stable for at least two weeks at 2-4 °C.

Attention

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

PubMed

[PubMed](#)

The second messenger cyclic AMP (cAMP) mediates diverse cellular responses to external signals such as proliferation, ion transport, regulation of metabolism and gene transcription by activation of the cAMP-dependent protein kinase (cAPK or PKA). Activation of PKA occurs when cAMP binds to the two regulatory subunits of the tetrameric PKA holoenzyme, resulting in release of active catalytic subunits. Activation of transcription upon elevation of cAMP levels results from translocation of PKA to the nucleus, where it phosphorylates the transcription factor cAMP response element binding protein (CREB) on Serine 133, which in turn leads to TFIIB binding to TATA-box-binding protein TBP1, thus linking phospho-CREB to the Pol II transcription initiation complex. Mouse Serine 96 (designated Ser 99 in human) is a phosphorylation site on the PKA II?regulatory subunit

Function:

Regulatory subunit of the cAMP-dependent protein kinases involved in cAMP signaling in cells. Type II regulatory chains mediate membrane association by binding to anchoring proteins, including the MAP2 kinase.

Subunit:

The inactive form of the enzyme is composed of two regulatory chains and two catalytic chains. Activation by cAMP produces two active catalytic monomers and a regulatory dimer that binds four cAMP molecules. Interacts with AKAP4 and CBFA2T3. Interacts with the phosphorylated form of PJA2.

Product Detail

Subcellular Location:

Cytoplasm. Cell membrane. Note=Co-localizes with PJA2 in the cytoplasm and the cell membrane.

Tissue Specificity:

Four types of regulatory chains are found: I-alpha, I-beta, II-alpha, and II-beta. Their expression varies among tissues and is in some cases constitutive and in others inducible.

Post-translational modifications:

Phosphorylated by the activated catalytic chain.

Similarity:

Belongs to the cAMP-dependent kinase regulatory chain family.

SWISS:

P13861

Gene ID:
5576

Database links:

[SwissProt: P13861](#) Human

[SwissProt: P12367](#) Mouse

[SwissProt: P12368](#) Rat

[Unigene: 631923](#) Human

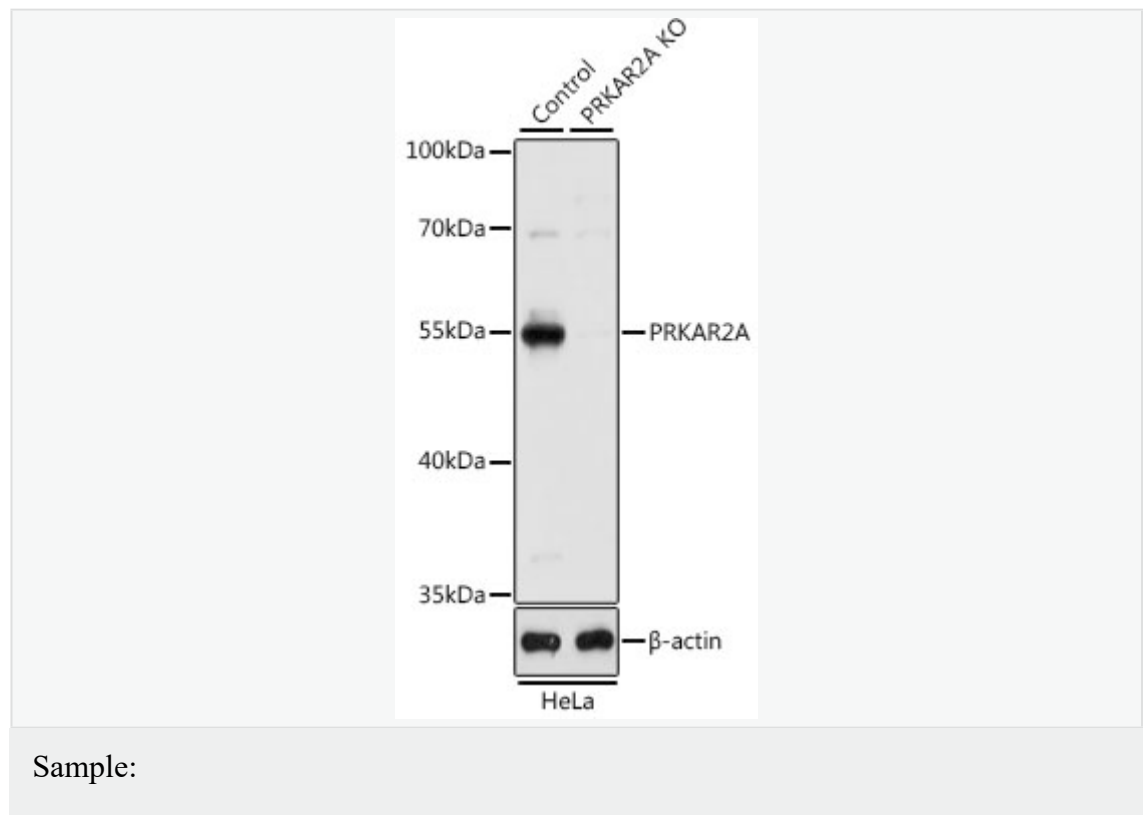
[Unigene: 731573](#) Human

[Unigene: 253102](#) Mouse

[Unigene: 486392](#) Mouse

[Unigene: 9742](#) Rat

**Product
Picture**



Lane 1: HeLa (Human) Cell Lysate at 25 ug

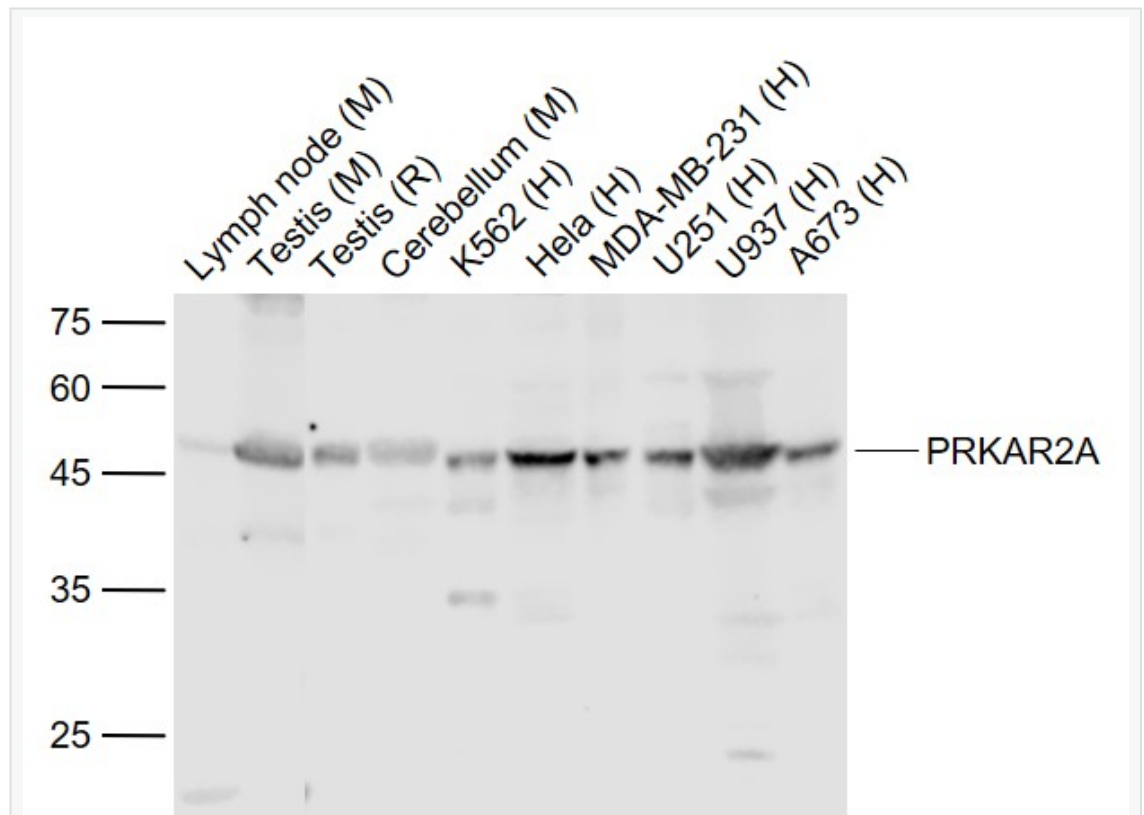
Lane 2: PRKAR2A knockout (KO) HeLa (Human) Cell Lysate at 25 ug

Primary: Anti-PRKAR2A (SL55176R) at 1/1000 dilution

Secondary: HRP Goat Anti-Rabbit IgG (H+L) at 1:10000 dilution

Predicted band size: 46 kD

Observed band size: 46 kD



Sample:

Lane 1: Lymph node (Mouse) Lysate at 40 ug

Lane 2: Testis (Mouse) Lysate at 40 ug

Lane 3: Testis (Rat) Lysate at 40 ug

Lane 4: Cerebellum (Mouse) Lysate at 40 ug

Lane 5: K562 (Human) Cell Lysate at 30 ug

Lane 6: Hela (Human) Cell Lysate at 30 ug

Lane 7: MDA-MB-231 (Human) Cell Lysate at 30 ug

Lane 8: U251 (Human) Cell Lysate at 30 ug

Lane 9: U937 (Human) Cell Lysate at 30 ug

Lane 10: A673 (Human) Cell Lysate at 30 ug

Primary: Anti-PRKAR2A (SL55176R) at 1/1000 dilution

Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 46 kD

Observed band size: 46 kD