Technical Data Sheet

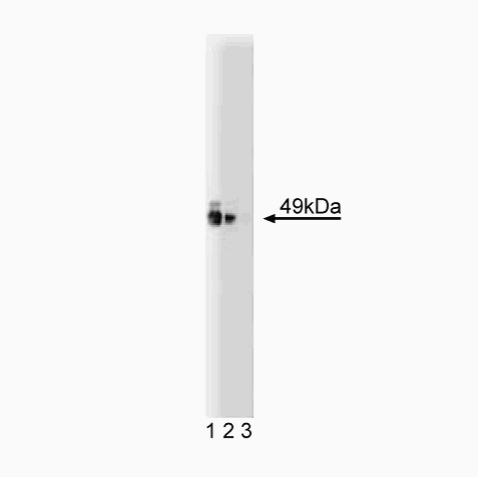
Purified Mouse Anti-PKA[RIα]

Product Information

Material Number:	**610609**
Size:	50 µg
Concentration:	250 µg/ml
Clone:	20/PKA RIα
Immunogen:	Human PKA [RIα] aa. 1-381
Isotype:	Mouse IgG1
Reactivity:	QC Testing: Rat Tested in Development: Human, Dog, Mouse, Chicken
Target MW:	49 kDa
Storage Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.

Description

cAMP-dependent Protein Kinase (PKA) is composed of two distinct subunits: catalytic (C) and regulatory (R). Four regulatory subunits have been identified: RIα, RIβ, RIIα, and RIIβ. 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 (Cα, Cβ, or Cγ). 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 Rα isoforms are ubiquitously expressed, the Rβ isoforms are predominant in nervous and adipose tissues. Expression of the RIβ subunit is modulated during muscle and adipocyte differentiation in vitro.



Western blot analysis of PKA [RIα] on a rat cerebrum lysate. *Lane 1; 1:250, lane 2; 1:500, lane 3: 1:1000 dilution of the mouse anti-PKA [RIα] antibody.*

Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.
Store undiluted at -20°C.

Application Notes

Application

Western blot	Routinely Tested
Immunohistochemistry	Not Recommended
Immunoprecipitation	Not Recommended
Immunofluorescence	Not Recommended

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Recommended Assay Procedure:

Western blot: Please refer to http://www.bdbiosciences.com/pharmingen/protocols/Western_Blotting.shtml

Suggested Companion Products

Catalog Number	Name	Size	Clone
611463	Rat Cerebrum Lysate	500 µg	(none)
554002	HRP Goat Anti-Mouse Ig	1.0 ml	(none)

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
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.
4. Source of all serum proteins is from USDA inspected abattoirs located in the United States.

References

Casey M, Vaughan CJ, He J, et al. Mutations in the protein kinase A R1alpha regulatory subunit cause familial cardiac myxomas and Carney complex. *J Clin Invest.* 2000; 106(5):R31-R38.(Biology: Western blot)

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Skalhegg BS, Landmark B, Foss KB, et al. 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 bov. *J Biol Chem.* 1992; 267(8):5374-5379.(Biology)

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Vang T, Torgersen KM, Sundvold V. Activation of the COOH-terminal Src kinase (Csk) by cAMP-dependent protein kinase inhibits signaling through the T cell receptor. *J Exp Med.* 2001; 193(4):497-507.(Biology: Western blot)