

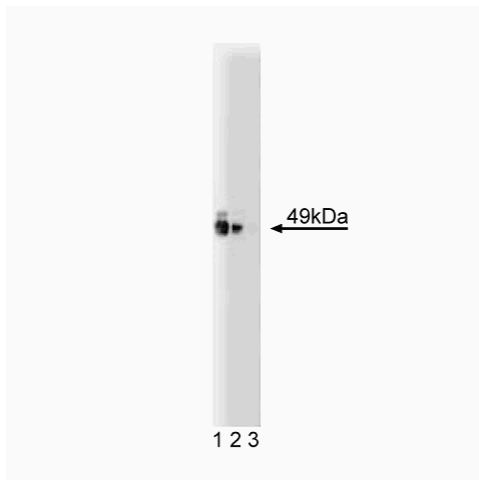
## Technical Data Sheet

**Purified Mouse Anti-PKA [RI $\alpha$ ]****Product Information**

<b>Material Number:</b>	<b>610610</b>
<b>Size:</b>	150 $\mu$ g
<b>Concentration:</b>	250 $\mu$ g/ml
<b>Clone:</b>	20/PKA RI $\alpha$
<b>Immunogen:</b>	Human PKA [RI $\alpha$ ] aa. 1-381
<b>Isotype:</b>	Mouse IgG1
<b>Reactivity:</b>	QC Testing: Rat Tested in Development: Human, Dog, Mouse, Chicken
<b>Target MW:</b>	49 kDa
<b>Storage Buffer:</b>	Aqueous buffered solution containing BSA, glycerol, and $\leq$ 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: RI $\alpha$ , RI $\beta$ , RII $\alpha$ , and RII $\beta$ . 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 (C $\alpha$ , C $\beta$ , or C $\gamma$ ). 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 R $\alpha$  isoforms are ubiquitously expressed, the R $\beta$  isoforms are predominant in nervous and adipose tissues. Expression of the RI $\beta$  subunit is modulated during muscle and adipocyte differentiation in vitro.



**Western blot analysis of PKA [RI $\alpha$ ] on a rat cerebrum lysate.** Lane 1: 1:250, lane 2: 1:500, lane 3: 1:1000 dilution of the mouse anti-PKA [RI $\alpha$ ] 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
Immunofluorescence	Not Recommended
Immunohistochemistry	Not Recommended
Immunoprecipitation	Not Recommended

**BD Biosciences**

[bdbiosciences.com](http://bdbiosciences.com)

United States 877.232.8995    Canada 888.259.0187    Europe 32.53.720.550    Japan 0120.8555.90    Asia Pacific 65.6861.0633    Latin America/Caribbean 55.11.5185.9995

For country-specific contact information, visit [bdbiosciences.com/how\\_to\\_order/](http://bdbiosciences.com/how_to_order/)

*Conditions: The information disclosed herein is not to be construed as a recommendation to use the above product in violation of any patents. BD Biosciences will not be held responsible for patent infringement or other violations that may occur with the use of our products. Purchase does not include or carry any right to resell or transfer this product either as a stand-alone product or as a component of another product. Any use of this product other than the permitted use without the express written authorization of Becton Dickinson and Company is strictly prohibited.*

*For Research Use Only. Not for use in diagnostic or therapeutic procedures. Not for resale.*

BD, BD Logo and all other trademarks are the property of Becton, Dickinson and Company. ©2008 BD



**Recommended Assay Procedure:**

**Western blot:** Please refer to [http://www.bdbiosciences.com/pharmingen/protocols/Western\\_Blotting.shtml](http://www.bdbiosciences.com/pharmingen/protocols/Western_Blotting.shtml)

**Suggested Companion Products**

<u>Catalog Number</u>	<u>Name</u>	<u>Size</u>	<u>Clone</u>
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](http://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)
- Sandberg M, Skalhegg B, Jahnsen T. 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. *Biochem Biophys Res Commun.* 1990; 167(1):323-330.(Biology)
- 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)
- Tasken KA, Collas P, Kemmner WA, Witczak O, Conti M, Tasken K. Phosphodiesterase 4D and protein kinase a type II constitute a signaling unit in the centrosomal area. *J Biol Chem.* 2001; 276(25):21999-22002.(Biology: Western blot)
- 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)