Technical Data Sheet

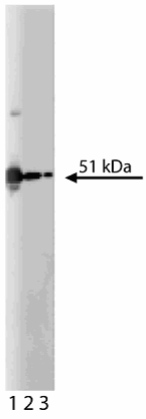
Purified Mouse Anti-PKA[RIIα]

Product Information

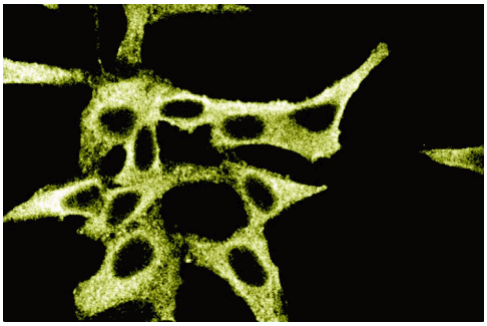
Material Number:	**612242**
Size:	50 µg
Concentration:	250 µg/ml
Clone:	40/PKA[RIIα]
Immunogen:	Human PKA[RIIα] aa. 1-404
Isotype:	Mouse IgG1
Reactivity:	QC Testing: Human Tested in Development: Dog, Mouse, Rat
Target MW:	51 kDa
Storage Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.

Description

cAMP-dependent **P**rotein **K**inase (PKA) is composed of two distinct subunits: catalytic(C) and regulatory (**R**). Four regulatory subunits have been identified: RIα, RIß, RIIα, and RIIß.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, Cß, 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 Rß isoforms are predominant in nervous and adipose tissues. Expression of the RIα subunit is modulated during muscle and adipocyte differentiation in vitro.



Western blot analysis of PKA[RIIα] on K562 lysate.
Lane 1: 1:1000, lane 2: 1:2000, lane 3: 1:4000 dilution of PKA[RIIα].



Immunofluorescence staining of HeLa cells.

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	Tested During Development
Immunoprecipitation	Not Recommended

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Suggested Companion Products

Catalog Number	Name	Size	Clone
554002	HRP Goat Anti-Mouse Ig	1.0 ml	(none)
554001	FITC Goat Anti-Mouse Ig	0.5 mg	Polyclonal
611550	K-562 Cell Lysate	500 µg	(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

Fukuyama T, Sueoka E, Sugio Y, et al. MTG8 proto-oncoprotein interacts with the regulatory subunit of type II cyclic AMP-dependent protein kinase in lymphocytes. *Oncogene.* 2001; 20(43):6225-6232.(Clone-specific: Immunofluorescence, Immunoprecipitation, 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)

Takahashi M, Mukai H, Oishi K, Isagawa T, Ono Y. Association of immature hypophosphorylated protein kinase cepsilon with an anchoring protein CG-NAP. *J Biol Chem.* 2000; 275(44):34592-34596.(Clone-specific: Western blot)

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Westphal RS, Soderling SH, Alto NM, Langeberg LK, Scott JD. Scar/WAVE-1, a Wiskott-Aldrich syndrome protein, assembles an actin-associated multi-kinase scaffold. *EMBO J.* 2000; 19(17):4589-4600.(Clone-specific: Immunofluorescence)