Technical Data Sheet

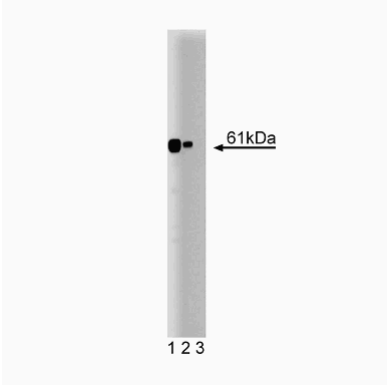
Purified Mouse Anti-Calcineurin

Product Information

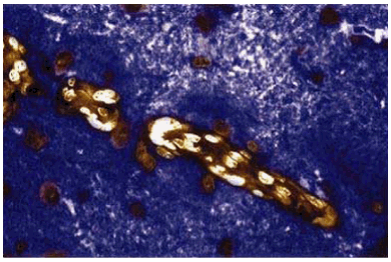
Material Number:	**610260**
Size:	150 µg
Concentration:	250 µg/ml
Clone:	29/Calcineurin
Immunogen:	Human Calcineurin aa. 247-449
Isotype:	Mouse IgG2a
Reactivity:	QC Testing: Rat Tested in Development: Human, Mouse, Chicken, Frog
Target MW:	61 kDa
Storage Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.

Description

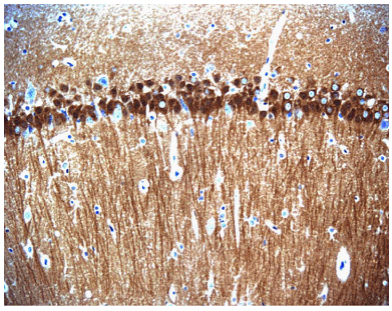
Calcineurin is a Ca2+/calmodulin-dependent protein phosphatase. The active enzyme is a heterodimer of a large calmodulin-binding catalytic subunit A (61 kDa) and a smaller Ca2+ binding subunit B (19 kDa). Regions corresponding to the calmodulin-binding site, an autoinhibitory domain, and a putative subunit B binding site have been identified within the large subunit A. The activity of calcineurin is sensitive to immunosuppressants such as cyclosporin A (CsA) and tacrolimus (FK506). The study of FK506-mediated inhibition of nitric oxide formation has revealed that nitric oxide synthase (NOS) is a calcineurin substrate. Calcineurin dephosphorylates NOS and enhances its catalytic activity. Therefore, Calcineurin is an essential mediator for efficient T cell antigen receptor (TCR)-mediated T cell activation.



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



Immunohistochemical staining of a rabbit brain section.



Immunohistochemical staining of pyrimidal cells in the rat hippocampus, formalin-fixed paraffin-embedded tissue section with no pre-treatment (20X magnification).

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
Immunohistochemistry	Tested During Development
Immunoprecipitation	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)
554001	FITC Goat Anti-Mouse Ig	0.5 mg	Polyclonal

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

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Sik A, Hajos N, Gulacsi A, Mody I, Freund TF. The absence of a major Ca2+ signaling pathway in GABAergic neurons of the hippocampus. *Proc Natl Acad Sci U S A.* 1998; 95(96):3245-3250.(Biology: Immunohistochemistry)

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Verin AD, Cooke C, Herenyiova M, Patterson CE, Garcia JG. Role of Ca2+/calmodulin-dependent phosphatase 2B in thrombin-induced endothelial cell contractile responses. *Am J Physiol.* 1998; 275(4 pt 1):L788-L799.(Biology: Immunofluorescence, Western blot)