

# Calcineurin B / PPP3R1 Monoclonal Mouse Antibody (BE2.1)



## Product Description

This antibody recognizes the Calcineurin B alpha protein, encoded by the PPP3R1 (Protein Phosphatase 3 Regulatory Subunit B Alpha) gene. Calcineurin is an enzyme that dephosphorylates serine and threonine residues in proteins. It is a heterodimer of a 59 kDa catalytic A subunit and a 19 kDa regulatory B subunit that is activated by the binding of calcium ions and calmodulin. Calcineurin is expressed in many tissues, but its levels are highest in the brain, where it may play a role in learning and memory. It has many substrates, including NFAT, a transcription factor that is activated by dephosphorylation. Complexes of the immuno-suppressants cyclosporine and FK506 with immunophilin proteins such as cyclophilin and FKBP12 are potent and specific inhibitors of Calcineurin activity. Alterations in Calcineurin activity are suspected to play a role in cardiac hypertrophy and graft versus host disease in organ transplantation.

Primary antibodies are available purified, or with a selection of fluorescent CF® dyes and other labels. CF® dyes offer exceptional brightness and photostability. See the [CF® Dye Brochure](#) for more information. Note: Conjugates of blue fluorescent dyes like CF®405S and CF®405M are not recommended for detecting low abundance targets, because blue dyes have lower fluorescence and can give higher non-specific background than other dye colors.

**Stock status:** Because Biotium offers a large number of antibody and conjugation options, primary antibody conjugates may be made to order. Typical lead times are up to one week for CF® dye and biotin conjugates, and up to 2-3 weeks for fluorescent protein and enzyme conjugates. Please email [order@biotium.com](mailto:order@biotium.com) to inquire about stock status and lead times before placing your order.

**Catalog number key for antibody number 2321, Calcineurin B / PPP3R1 Monoclonal Mouse Antibody (BE2.1)**

## Product attributes

Antibody number	#2321
Antibody reactivity (target)	Calcineurin B, PPP3R1
Antibody type	Primary
Host species	Mouse
Clonality	Monoclonal
Clone	BE2.1
Isotype	IgG2a, kappa
Molecular weight	19 kDa
Synonyms	Calcineurin B; Calcineurin subunit B type 1; Protein Phosphatase 3 Regulatory Subunit B Alpha; CALNB1; Cna2; CNB; CNB1; PPP3R1
Human gene symbol	PPP3R1
Entrez gene ID	5534
SwissProt	P63098
Unigene	280604
Immunogen	Recombinant full-length human Calcineurin B protein
Antibody target cellular localization	Nucleus & cytoplasm
Species reactivity	Human, Xenopus laevis
Antibody application notes	For coating for ELISA, order Ab without BSA. Higher concentration may be required for direct detection using primary antibody conjugates than for indirect detection with secondary antibody. Optimal dilution and staining procedure for a specific application should be determined by user. Recommended starting concentrations for titration are 1-2 ug/mL for most applications, or 1 ug/million cells/100 uL for flow cytometry
Positive control	HeLa, MCF-7 or A431 cells. Human brain, breast or stomach tissue.
Shipping condition	Room temperature
Storage Conditions	Store at 2 to 8 °C, Protect fluorescent conjugates from light, Note: store BSA-free antibodies at -10 to -35 °C
Regulatory status	For research use only (RUO)
Antibody/conjugate formulation	Conjugates: 0.1 mg/mL in PBS/0.1% BSA/0.05% azide, HRP conjugates: 0.1 mg/mL in PBS/0.05% BSA, Purified: 0.2 mg/mL in PBS/0.05% BSA/0.05% azide, Purified, BSA-free: 1 mg/mL in PBS without azide
Shelf life	Guaranteed for at least 24 months from date of receipt when stored as recommended
Antibody research areas	Ion channels
Product origin	Product may contain either bovine serum albumin (BSA) from bovine serum ( <i>Bos taurus</i> ), or recombinant BSA produced in Chinese hamster ovary cells. Inquire for the specific lot.
Cell/tissue expression	Brain, T-cells

Antibody # prefix	Conjugation	Ex/Em (nm)	Laser line	Detection channel	Dye Features
BNC04	CF®405S	404/431	405	DAPI (microscopy), AF405	<a href="#">CF®405S Features</a>
BNC88	CF®488A	490/515	488	GFP, FITC	<a href="#">CF®488A Features</a>
BNC68	CF®568	562/583	532, 561	RFP, TRITC	<a href="#">CF®568 Features</a>
BNC94	CF®594	593/614	561	Texas Red®	<a href="#">CF®594 Features</a>
BNC40	CF®640R	642/662	633-640	Cy®5	<a href="#">CF®640R Features</a>
BNC47	CF®647	650/665	633-640	Cy®5	<a href="#">CF®647 Features</a>
BNC74	CF®740	742/767	633-685	775/50	<a href="#">CF®740 Features</a>
BNCB	Biotin	N/A	N/A	N/A	
BNUB	Purified	N/A	N/A	N/A	
BNUM	Purified, BSA-free	N/A	N/A	N/A	

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