

Product Data Sheet

Cat# SP-55228-1

Description: Calcineurin Autoinhibitory Peptide [H-Ile-Thr-Ser-Phe-Glu-Glu-Ala-Lys-Gly-Leu-Asp-Arg-Ile-Asn-Gly-Arg-Met-Pro-Pro-Arg-Arg-Asp-Ala-Met-Pro-OH; MW: 2930.38]

Size: 0.5 mg

Purity: >95%

Store: Desiccated at -20oC.

Calcineurin (CaN) is a calcium and calmodulin dependent serine/threonine protein phosphatase (also known as protein phosphatase 3, and calcium-dependent serine-threonine phosphatase). It activates the T cells of the immune system and can be blocked by drugs. Calcineurin activates nuclear factor of activated T cell, cytoplasmic (NFATc), a transcription factor, by dephosphorylating it. The activated NFATc is then translocated into the nucleus, where it upregulates the expression of interleukin 2 (IL-2), which, in turn, stimulates the growth and differentiation of T cell response. Calcineurin is the target of a class of drugs called calcineurin inhibitors, which includes ciclosporin, pimecrolimus and tacrolimus.

This peptide is a specific inhibitor for calcineurin (PP2BA), a Ser/Thr protein phosphatase from the PPP family and PP2B subfamily. The peptide corresponds to the residues 467-491 within the inhibitory domain of human calcineurin alpha subunit. Calcineurin is known to dephosphorylate heat shock protein beta-1 (HSPB1) and protein phosphatase Slingshot homolog 1 (SSH1). This peptide inhibits Mn²⁺-stimulated calcineurin activity (IC₅₀ = 10 uM using 32P-myosin light chain as substrate) but has no effect on Ni²⁺-stimulated

enzyme activity. It does not inhibit CaMKII kinase, protein phosphatase 1 or 2A.

General References: Kissinger, CR (1995) Nature 378 (6557): 641–4; Liu, L (2005) Mol. Biol. Rep. 32 (1): 41–5; Yamashita, M (2000) J. Exp. Med. 191 (11): 1869–79.

*This product is for In vitro research use only.

Related material available from ADI

Catalog# Prod Description

CALN11-A	Anti-bovine Calcineurin (A+B subunits) protein, IgG, aff pure
CALN11-C	Purified Bovine Calcineurin protein (A+B subunits) WB +Ve control
CALNA12-A	Anti-Human Calcineurin A-subunit IgG aff pure
CALNA12-C	Human Calcineurin A-subunit protein WB +Ve control
CALNA12-P	Human Calcineurin A-subunit Control/blocking peptide
CALNA13-M	Monoclonal Anti-Human Calcineurin A-subunit ascites
CALNA15-R	Human Calcineurin A-subunit protein biologically active
CALNB21-C	Human Calcineurin B -subunit protein WB +Ve control
CALNB21-S	Anti-Mouse Calcineurin B subunit antiserum
CALNB22-M	Mouse Monoclonal Anti-Human Calcineurin B subunit IgG, aff pure
SP-51014-1	Calcineurin Substrate
SP-55228-1	Calcineurin Autoinhibitory Peptide [H-Ile-Thr-Ser-Phe-Glu-Glu-Ala-Lys-Gly-Leu-Asp-Arg-Ile-Asn-Gly-Arg-Met-Pro-Pro-Arg-Arg-Asp-Ala-Met-Pro-OH; MW: 2930.38]
SP-55228-1-Calcineurin	160328SV