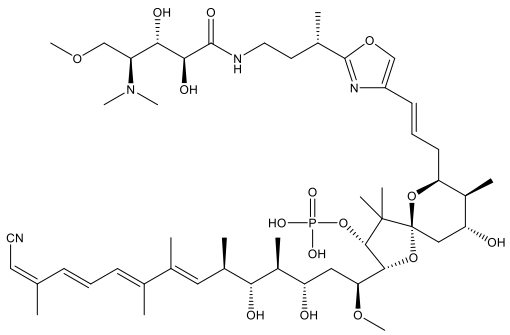
Catalog # 10-1230

Calyculin A

CAS# 101932-71-2

Natural product from the marine sponge *Discodermia calyx.*

Lot # X102282



A potent cell permeable inhibitor of protein phosphatase 1 (PP1) and 2A (PP2A), IC_{50}=0.3-1 nM.[1] Has no effect on PP2B, PP2C as well as acid or alkaline phosphatase at 1 μM.[2] A non-phorbol tumor promoter.[3] Stimulates the phosphorylation of various cellular proteins such as vimentin[4] and $NF_{\kappa}B$[5] and also induces membrane translocation of protein kinase C[6].

1. Ishihara *et al.* (1989), *Calyculin A and okadaic acid: inhibitors of protein phosphatase activity;* Biochem. Biophys. Res. Commun.**159** 871
2. Swingle *et al.* (2009), *Small-molecule inhibitors of ser/thr protein phosphatases: specificity, use and common forms of abuse;* Methods Mol. Biol. **365** 23
3. Fujiki *et al.* (1991), *Mechanisms of action of okadaic acid class tumor promoters on mouse skin;* Environ. Health Perspect. **93** 211
4. Tzivion *et al.* (2000), *Calyculin A-induced vimentin phosphorylation sequesters 14-3-3 and displaces other 14-3-3 partners in vivo;* J. Biol. Chem. **275** 29772
5. Tanaka *et al.* (2007) *Calyculin A induces apoptosis and stimulates phosphorylation of p65NF-kappaB in human osteoblastic osteosarcoma MG63 cells;* Int. J. Oncol. **31** 389
6. Gopalakrishna *et al.* (1992), *Nonphorbol tumor promoters okadaic acid and calyculin-A induce membrane translocation of protein kinase C;* Biochem. Biophys. Res. Commun. **189** 950

PHYSICAL DATA

Molecular Weight:	1009.18
Molecular Formula:	$C_{50}H_{81}N_4O_{15}P$
Purity:	95% by HPLC
Solubility:	DMSO or ethanol
Physical Description:	Thin film (Note: Vials may appear to be empty)
Storage and Stability:	Store as supplied desiccated at -20°C for up to 2 years from the date of purchase. Solutions in DMSO may be stored at -20°C for up to 2 months.

Focus Biomolecules LLC 400 Davis Drive, Suite 600 Plymouth Meeting PA 19462

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