Revision 2

#9902 Store at -20C

Calyculin A

10 µg

Cell Signaling TECHNOLOGY®

Orders: 877-616-CELL (2355)
orders@cellsignal.com

Support: 877-678-TECH (8324)

Web: info@cellsignal.com
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

For Research Use Only. Not for Use in Diagnostic Procedures.

Background

Calyculin A inhibits the activity of protein phosphatases PP1 and PP2A (1,2). Unlike Okadaic acid, which reduces PP2A activity but has little effect on PP1 activity, Calyculin A inhibits both phosphatases (1). Neither Calyculin A nor Okadaic acid inhibit acid or alkaline phosphatases or phospho- tyrosine protein phosphatases (2).

Description

Calyculin A is a more potent phosphatase inhibitor than Okadaic acid (2). As shown by Western blot, treatment of cells with 100 nM Calyculin A for 30 minutes induces threonine phosphorylation, detected by Phospho-Threonine-Polyclonal Antibody #9381. IC_{50} values for inhibitory activity against PP1 are approximately 2 nM. IC_{50} values for inhibitory activity against PP2A are approximately 0.5 -1.0 nM.

Molecular Formula

$C_{50}H_{81}N_4O_{15}P$

Molecular Weight

1009.17 g/mol

Purity

>98%

CAS

101932-71-2

Solubility

Soluble in DMSO at 50mM and EtOH at 1mg/ml.

Storage

Store lyophilized at -20ºC, desiccated. In lyophilized form, the chemical is stable for 24 months. Once in solution, continue to store at -20ºC and use within 1 month to prevent loss of potency. Aliquot to avoid multiple freeze/thaw cycles.

Directions for Use:

Calyculin A is supplied as a lyophilized clear film. For 10 µM stock, reconstitute in 1 ml DMSO. Store in aliquots at -20ºC in the dark. Treat cells with 50-100 nM calyculin A for 5-30 minutes. Store in aliquots tightly sealed (unopened) at -20ºC in the dark. See MSDS.

This compound is sold only for use in extremely dilute solutions for biological research. No other use is intended and any other use involves substantial hazards. This compound should never be handled in powder or aerosol form or in any other form susceptible to uncontrolled release in the laboratory, even in very small quantities.

Background References

1. Resjö, S. et al. (1999) *Biochem J* 341 (Pt 3), 839-45.
2. Ishihara, H. et al. (1989) *Biochem Biophys Res Commun* 159, 871-7.

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster **X:** Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse **GP:** Guinea Pig **Rab:** rabbit **All:** all species expected

Trademarks and Patents

Limited Uses

Except as otherwise expressly agreed in a writing signed by a legally authorized representative of CST, the following terms apply to Products provided by CST, its affiliates or its distributors. Any Customer's terms and conditions that are in addition to, or different from, those contained herein, unless separately accepted in writing by a legally authorized representative of CST, are rejected and are of no force or effect.

Products are labeled with For Research Use Only or a similar labeling statement and have not been approved, cleared, or licensed by the FDA or other regulatory foreign or domestic entity, for any purpose. Customer shall not use any Product for any diagnostic or therapeutic purpose, or otherwise in any manner that conflicts with its labeling statement. Products sold or licensed by CST are provided for Customer as the end-user and solely for research and development uses. Any use of Product for diagnostic, prophylactic or