

#9902 Store at -20°C

# Calyculin A

✓ 10 µg



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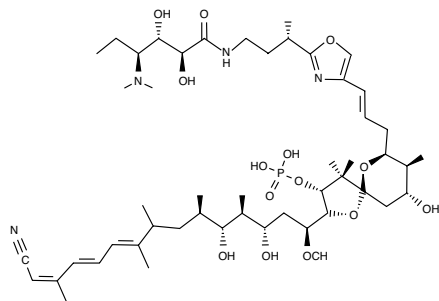
rev. 04/02/18

For Research Use Only. Not For Use In Diagnostic Procedures.

**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<sub>50</sub> values for inhibitory activity against PP1 are approximately 2 nM. IC<sub>50</sub> values for inhibitory activity against PP2A are approximately 0.5-1.0 nM.

**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).

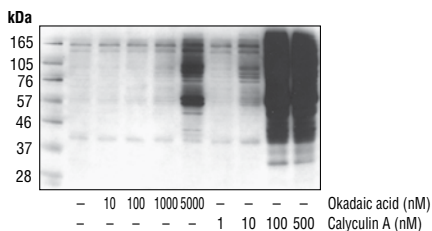
**Molecular Formula:** C<sub>50</sub>H<sub>81</sub>N<sub>4</sub>O<sub>15</sub>P



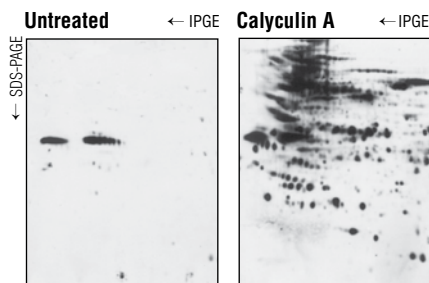
**Directions for Use:** Calyculin A is supplied as a lyophilized clear film. For 10 µM stock, reconstitute in 1 ml DMSO. Store in aliquots at -20°C in the dark. Treat cells with 50-100 nM calyculin A for 5-30 minutes. Store in aliquots tightly sealed (unopened) at -20°C in the dark. See MSDS.

**Background References:**

- (1) Resjo, S. et al. (1999) *Biochem. J.* 341, 839-845.
- (2) Ishihara, H. et al. (1989) *Biochem. Biophys. Res. Commun.* 159(3), 871-877.



Western blot analysis of extracts from A431 cells treated with varied concentrations of Okadaic Acid or calyculin A (30 minutes) using P-Thr-Polyclonal #9381.



Western blot analysis of extracts from Jurkat cells, untreated or treated with Calyculin A-treated (0.1 µM for 45 minutes prior to lysis), using P-Thr-Polyclonal #9381. Proteins were separated by 2D electrophoresis prior to blotting.

**Storage:** Store lyophilized or in solution at -20°C, desiccated. Protect from light. In lyophilized form, the chemical is stable for 24 months. Once in solution, use within 3 months to prevent loss of potency. Aliquot to avoid multiple freeze/thaw cycles.

**Precautions:** 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.

See enclosed Material Safety Data Sheet (MSDS) or refer to our website for further information.

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**Applications Key:** W—Western IP—Immunoprecipitation IHC—Immunohistochemistry IC—Immunocytochemistry IF—Immunofluorescence F—Flow cytometry E—ELISA D—DELFIATM  
**Species Cross-Reactivity Key:** H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken X—Xenopus Z—zebra fish B—bovine All—all species expected  
Species enclosed in parentheses are predicted to react based on 100% sequence homology.