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\textsubscript{50} values for inhibitory activity against PP1 are approximately 2 nM. IC\textsubscript{50} values for inhibitory activity against PP2A are approximately 0.5 - 1.0 nM.

Molecular Formula
C_{50}H_{81}Na_{15}O_{41}P_{50}

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 -20°C, desiccated. In lyophilized form, the chemical is stable for 24 months. Once in solution, continue to store at -20°C 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 -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.

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

Cross-Reactivity Key

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