Product Information

- Name: Calyculin A ((-)-Calyculin A)
- CAS No.: 101932-71-2
- Molecular Formula: $C_{50}H_{81}N_4O_{15}P$ | Molecular Weight: 1009.17 g/mol
- Appearance: White to off-white solid powder

Biological Activity

- Target and Mechanism: A potent and cell-permeable inhibitor of protein phosphatase 1 (PP1) and protein phosphatase 2A (PP2A).
- IC_{50} Values: Approximately 0.5-1 nM for PP2A, and approximately 2 nM for PP1.
- In Vitro Applications: Used to study the role of protein phosphorylation in cell signaling, cell cycle regulation, and other processes by inhibiting phosphatase activity. For example, it induces cytotoxicity in osteosarcoma MG63 cells at concentrations of 1-10 nM for 24 hours.

Handling and Storage

- Storage: Store powder at -20°C for up to 3 years. Store dissolved solutions at -80°C for up to 6 months.
- Solubility: Specific solvent and solubility information are not explicitly listed on the source webpage. It is recommended to consult authoritative solvent databases or try using DMSO for initial dissolution.

Precautions

- This product is for research use only and must not be used for clinical diagnosis or treatment.
- Calyculin A is a highly toxic compound. Always wear appropriate personal protective equipment, handle it in a fume hood, and strictly adhere to laboratory safety regulations.