

Product Information

Calphostin C

From *Cladosporium Cladosporioides*

Product No. C6303

CAS Number 121263-19-2

Physical Properties

Appearance: Brown powder

Molecular formula: C₄₄H₃₈O₁₄

Inhibitory potencies were given as 0.05 μM for PKC,
>50 μ for PKA, >25 μM for PKG

Storage / Stability as Supplied

When stored at -20°C and protected from light,
calphostin C should have a minimum shelf life of two
years.

Solubility / Solution Stability

Stock solutions of calphostin C are typically made in
DMSO up to 1 mg per ml. Solutions should be
prepared fresh.

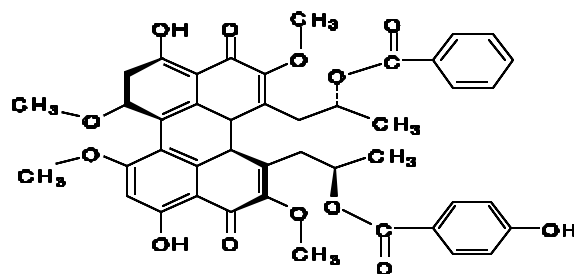
Applications

Calphostin is a perylenequinone metabolite of the
fungus *Cladosporium cladosporioides*.¹
This Protein Kinase C inhibitor crosses the cell
membrane. It does not compete with Ca⁺⁺ or
phospholipids, but it inhibits phorbol dibutyrate binding
to PKC. Activation can be carried out using an 8 watt
fluorescent bulb located 15 cm from the culture dish.^{2,3}

Calphostin C is a potent inhibitor of protein kinase C
(IC₅₀ = 0.05 μM). Calphostin C also inhibits protein
kinase A at much higher concentrations
(IC₅₀>50μM).^{4,5,6}

The requirement for photo-activation of calphostin C
was first described by Bruns, F. et al.³

At concentrations of 10-100 nM calphostin C was
shown to suppress teleocidin activated lymphocyte
growth transformation by Epstein-Barr virus.⁷



References

1. Weiss, U., et al., Fortschritte der Chemie organischer Naturstoff, Vol. **52**, Verlag (1987), 1-71.
2. Supplier information.
3. Bruns, R.F., et al., Biochem. Biophys. Res. Commun., **176**, 288 (1991).
4. Kobayashi, E., et al., B.B.R.C., **159**, 548 (1989).
5. Tamaoki, T., et al., Biotechnology **8**, 732, (1990).
6. Kobayashi, E., et al., J. Antibiotics **42**, 1470-1474 (1989).
7. Kinoshita, T., et al., Anticancer Research **10**, 1051-1054 (1990).

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