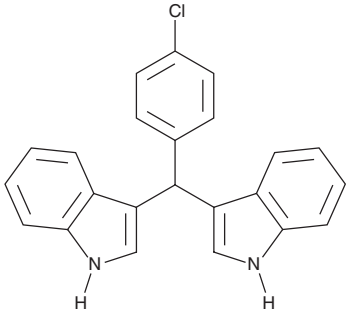
PRODUCT INFORMATION

C-DIM12

Item No. 22951

CAS Registry No.:	178946-89-9
Formal Name:	3,3'-[(4-chlorophenyl) methylene]*bis*-1H-indole
Synonym:	4-Chlorophenyl-3,3'-diindolylmethane
MF:	$C_{23}H_{17}ClN_2$
FW:	356.9
Purity:	≥98%
UV/Vis.:	λ_{max}: 203, 224, 282 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

C-DIM12 is supplied as a crystalline solid. A stock solution may be made by dissolving the C-DIM12 in the solvent of choice. C-DIM12 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of C-DIM12 in these solvents is approximately 20 mg/ml.

Description

C-DIM12 is a *para*-phenyl-substituted diindolylmethane (C-DIM) that is an orally bioavailable activator of nuclear receptor-related protein 1 (Nurr1/NR4A2).[1] It is selective for Nurr1, not activating Nur77, neuron-derived orphan receptor 1 (Nor1), or the retinoid X receptor (RXR) in parallel luciferase assays. C-DIM12 (2.5-10 µM) inhibits proliferation of Ku7 and 253J B-V bladder cancer cells in a dose-dependent manner and induces apoptosis of KU7 cells in a Nurr1-dependent manner. In an orthotopic nude mouse model, C-DIM12 suppresses bladder cancer cell growth by 44 and 59% at doses of 12.5 and 25 mg/kg, respectively. C-DIM12 has neuroprotective properties, preventing dopaminergic cell loss and reducing the expression of NF-κB in the substantia nigra pars compacta in an MPTP mouse model of Parkinson's disease.[2] It also has analgesic and anti-inflammatory activity in the tail immersion and carrageenan paw edema assays at a dose of 100 mg/kg, without causing ulcers in rats.[3]

References

1. Inamoto, T., Papineni, S., Chintharlapalli, S., *et al.* 1,1-*Bis*(3'-indolyl)-1-(*p*-chlorophenyl)methane activates the orphan nuclear receptor Nurr1 and inhibits bladder cancer growth. *Mol. Cancer Ther.* **7(12)**, 3825-3833 (2008).
2. De Miranda, B.R., Popichak, K.A., Hammond, S.L., *et al.* Novel *para*-phenyl substituted diindolylmethanes protect against MPTP neurotoxicity and suppress glial activation in a mouse model of Parkinson's disease. *Toxicol. Sci.* **143(2)**, 360-373 (2015).
3. Sujatha, K., Perumal, P.T., Muralidharan, D., *et al.* Synthesis, analgesic and anti-inflammatory activities of *bis*(indolyl)methanes. *Indian J. Chem.* **48B(02)**, 267-272 (2009).

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