

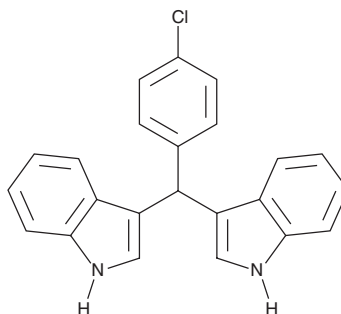
# PRODUCT INFORMATION



## 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<sub>23</sub>H<sub>17</sub>ClN<sub>2</sub>  
**FW:** 356.9  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 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).<sup>1</sup> 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.<sup>2</sup> 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.<sup>3</sup>

### 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).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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