



**Catalog Number:** MC11016

**Product Type:** Small Molecule

**Bio-Activity:** Neuroprotective

**CAS #:** 301353-96-8

**Research Categories:** Neuroscience, cell death, stem cells

**Chemical Name:** 1-(3,6-Dibromo-9H-carbazol-9-yl)-3-(phenylamino)propan-2-ol

**Solubility:** Soluble in DMSO (up to 30 mg/ml).

**Molecular Formula:** C<sub>21</sub>H<sub>18</sub>Br<sub>2</sub>N<sub>2</sub>O

**Purity:** > 98%

**Molecular Weight:** 474.20

**Format:** Powder

**Ship Temp:** Ambient

**Storage:** -20°C

### Application Notes

**Description/Data:**

P7C3 has been shown to protect newborn neurons from apoptosis, suggesting it is neuroprotective. Administration of P7C3 to aged rats prevented neuronal death and preserved cognitive capacity (1). It has been shown to delay disease progression in G93A-SOD2 mutant mouse model of amyotrophic lateral sclerosis (2). In a mice model of Parkinson disease, it stops MPTP-mediated cell death of dopaminergic neurons (3). It also restores hippocampal neurogenesis in a mouse model of Down Syndrome (4). P7C3 activates nicotinamide phosphoribosyltransferase (NAMPT) with concomitant increase of intracellular levels of NA (5).

**References:**

- 1) Pieper et al. (2010), Discovery of a proneurogenic, neuroprotective chemical; *Cell*, 142 39
- 2) Tesla et al. (2012), Neuroprotective efficacy of aminopropyl carbazoles in a mouse model of amyotrophic lateral sclerosis; *Proc. Natl. Acad. Sci. USA*, 109 17016
- 3) De Jesus-Cortes et al. (2012), Neuroprotective efficacy of aminopropyl carbazoles in a mouse model of Parkinson disease; *Proc. Natl. Acad. Sci. USA*, 109 17010
- 4) Latchney et al. (2015), Chronic P7C3 treatment restores hippocampal neurogenesis in the Ts65Dn mouse model of Down Syndrome; *Neurosci. Lett.* 591 86

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5) Wang et al. (2014), P7C3 Neuroprotective Chemicals Function by Activating the Rate-Limiting Enzyme in NAD Salvage;  
*Cell*, 158 1324

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