

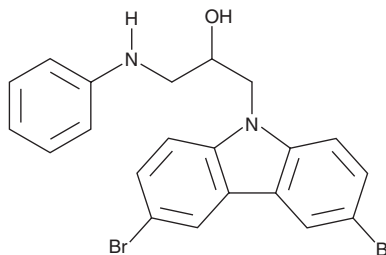
# PRODUCT INFORMATION



## P7C3

Item No. 16682

**CAS Registry No.:** 301353-96-8  
**Formal Name:** 3,6-dibromo- $\alpha$ -[(phenylamino)methyl]-9H-carbazole-9-ethanol  
**MF:** C<sub>21</sub>H<sub>18</sub>Br<sub>2</sub>N<sub>2</sub>O  
**FW:** 474.2  
**Purity:**  $\geq$ 98%  
**UV/Vis.:**  $\lambda_{\text{max}}$ : 235, 269, 305, 345, 360 nm  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:**  $\geq$ 4 years



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

### Laboratory Procedures

P7C3 is supplied as a crystalline solid. A stock solution may be made by dissolving the P7C3 in the solvent of choice, which should be purged with an inert gas. P7C3 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of P7C3 in ethanol is approximately 0.2 mg/ml and approximately 30 mg/ml in DMSO and DMF.

### Description

P7C3 is an orally bioavailable and brain penetrant aminopropyl carbazole that exhibits proneurogenic and neuroprotective activity by preventing apoptosis of newly postmitotic neurons in the subgranular zone of the hippocampal dentate gyrus.<sup>1</sup> At doses of 5 mg/kg and above, it has been shown to promote the survival of neurons in various rodent models of neurodegeneration or nerve injury.<sup>2,3</sup> While the precise mechanism of action through which these effects are exerted remains uncertain, P7C3 recently has been shown to bind nicotinamide phosphoribosyltransferase, the rate-limiting enzyme involved in the conversion of nicotinamide into NAD.<sup>4</sup>

### References

1. Pieper, A.A., Xie, S., Capota, E., *et al.* Discovery of a pro-neurogenic, neuroprotective chemical. *Cell* **142**(1), 39-51 (2010).
2. De Jesús-Cortés, H., Xu, P., Drawbridge, J., *et al.* Neuroprotective efficacy of aminopropyl carbazoles in a mouse model of Parkinson disease. *Proc. Natl. Acad. Sci. USA* **109**(42), 17010-17015 (2012).
3. Tesla, R., Wolf, H.P., Xu, P., *et al.* Neuroprotective efficacy of aminopropyl carbazoles in a mouse model of amyotrophic lateral sclerosis. *Proc. Natl. Acad. Sci. USA* **109**(42), 17016-17021 (2012).
4. Wang, G., Han, T., Nijhawan, D., *et al.* P7C3 neuroprotective chemicals function by activating the rate-limiting enzyme in NAD salvage. *Cell* **158**(6), 1324-1334 (2014).

#### 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.

#### WARRANTY AND LIMITATION OF REMEDY

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