

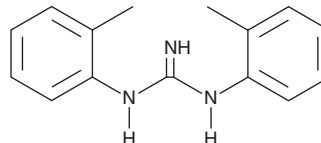
PRODUCT INFORMATION



1,3-Di-*o*-tolylguanidine

Item No. 31736

CAS Registry No.: 97-39-2
Formal Name: N,N'-bis(2-methylphenyl)-guanidine
Synonyms: DTG, NSC 132023, NSC 473
MF: C₁₅H₁₇N₃
FW: 239.3
Purity: ≥95%
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

1,3-Di-*o*-tolylguanidine (DTG) is supplied as a crystalline solid. A stock solution may be made by dissolving the DTG in the solvent of choice, which should be purged with an inert gas. DTG is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of DTG in ethanol is approximately 1 mg/ml and approximately 30 mg/ml in DMSO and DMF.

Description

DTG is a sigma (σ) receptor ligand (K_i s = 61 and 42 nM for σ_1 and σ_2 receptors, respectively).¹ *In vivo*, DTG (10, 15, and 20 mg/kg, i.p.) increases latency to tail withdrawal in the tail flick test and induces hypothermia in mice.² It decreases infarct size and increases the number of cortical and hippocampal NeuN-positive neurons in a rat model of ischemia-reperfusion injury induced by middle cerebral artery occlusion (MCAO).³

References

1. Kokornaczyk, A.K., Schepmann, D., Yamaguchi, J., *et al.* Thiazole-based σ_1 receptor ligands: Diversity by late-stage C-H arylation of thiazoles, structure-affinity and selectivity relationships, and molecular interactions. *ChemMedChem* **12**(13), 1070-1080 (2017).
2. Kest, B., Mogil, J.S., Sternberg, W.F., *et al.* Antinociception following 1,3-di-*o*-tolylguanidine, a selective σ receptor ligand. *Pharmacol. Biochem. Behav.* **50**(4), 587-592 (1995).
3. Ajmo, C.T., Jr., Vernon, D.O.L., Collier, L., *et al.* Sigma receptor activation reduces infarct size at 24 hours after permanent middle cerebral artery occlusion in rats. *Curr. Neurovasc. Res.* **3**(2), 89-98 (2006).

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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