

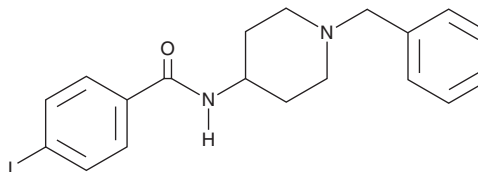
PRODUCT INFORMATION



4-IBP

Item No. 31518

CAS Registry No.: 155798-08-6
Formal Name: 4-iodo-N-[1-(phenylmethyl)-4-piperidinyl]-benzamide
Synonym: NSC 667672
MF: $C_{19}H_{21}IN_2O$
FW: 420.3
Purity: $\geq 98\%$
UV/Vis.: λ_{max} : 252 nm
Supplied as: A solid
Storage: $-20^{\circ}C$
Stability: ≥ 4 years



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

Laboratory Procedures

4-IBP is supplied as a solid. A stock solution may be made by dissolving the 4-IBP in the solvent of choice, which should be purged with an inert gas. 4-IBP is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of 4-IBP in ethanol is approximately 100 $\mu g/ml$ and approximately 1 mg/ml for DMSO and DMF.

4-IBP is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, 4-IBP should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. 4-IBP has a solubility of approximately 0.25 mg/ml in a 1:3 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

4-IBP is a sigma-1 (σ_1) receptor ligand ($K_i = 1.7$ nM).^{1,2} It is selective for σ_1 over σ_2 receptors ($K_i = 25.2$ nM). It inhibits the growth and migration of PC3 prostate cancer and A549 non-small cell lung cancer (NSCLC) cells, as well as the migration of C32 melanoma and U373 MG glioblastoma cells, when used at a concentration of 10 μM .¹ 4-IBP (2 mg/kg) increases survival in a U373 MG mouse xenograft model. It also increases firing of serotonergic neurons in the rat dorsal raphe nucleus when administered at a dose of 2 mg/kg.²

References

1. Mégalizzi, V., Mathieu, V., Mijatovic, T., et al. 4-IBP, a σ_1 receptor agonist, decreases the migration of human cancer cells, including glioblastoma cells, *in vitro* and sensitizes them *in vitro* and *in vivo* to cytotoxic insults of proapoptotic and proautophagic drugs. *Neoplasia* **9**(5), 358-369 (2007).
2. Bermack, J.E. and Debonnel, G. Modulation of serotonergic neurotransmission by short- and long-term treatments with sigma ligands. *Br. J. Pharmacol.* **134**(3), 691-699 (2001).

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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