

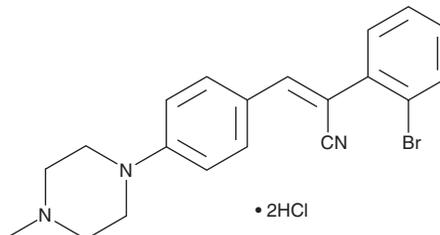
PRODUCT INFORMATION



DG-172 (hydrochloride)

Item No. 19128

CAS Registry No.: 1361504-77-9
Formal Name: 2-bromo- α Z-[[4-(4-methyl-1-piperazinyl)phenyl]methylene]-benzeneacetonitrile, dihydrochloride
MF: C₂₀H₂₀BrN₃ • 2HCl
FW: 455.2
Purity: \geq 98%
UV/Vis.: λ_{max} : 241, 348 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

DG-172 (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the DG-172 (hydrochloride) in the solvent of choice, which should be purged with an inert gas. DG-172 (hydrochloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of DG-172 (hydrochloride) in ethanol is approximately 20 mg/ml and approximately 25 mg/ml in DMSO and DMF.

DG-172 (hydrochloride) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, DG-172 (hydrochloride) should first be dissolved in DMF and then diluted with the aqueous buffer of choice. DG-172 (hydrochloride) has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

DG-172 is an orally available inverse agonist of PPAR β/δ (IC₅₀ = 27 nM), down-regulating transcription of ANGPTL4 in mouse myoblasts (IC₅₀ = 9.5 nM).¹ It alters the differentiation of bone marrow cells, augmenting GM-CSF-induced development into subsets of mature and immature dendritic cells.² Inverse agonists of PPAR β/δ , including DG-172, inhibit cancer cell invasion through suppression of ANGPTL4 expression.³

References

- Lieber, S., Scheer, F., Meissner, W., *et al.* (Z)-2-(2-bromophenyl)-3-[[4-(1-methyl-piperazine)amino]phenyl] acrylonitrile (DG172): An orally bioavailable PPAR β/δ -selective ligand with inverse agonistic properties. *J. Med. Chem.* **55(6)**, 2858-2868 (2012).
- Lieber, S., Scheer, F., Finkernagel, F., *et al.* The inverse agonist DG172 triggers a PPAR β/δ -independent myeloid lineage shift and promotes GM-CSF/IL-4-induced dendritic cell differentiation. *Mol. Pharmacol.* **87(2)**, 162-173 (2015).
- Adhikary, T., Brandt, D.T., Kaddatz, K., *et al.* Inverse PPAR β/δ agonists suppress oncogenic signaling to the ANGPTL4 gene and inhibit cancer cell invasion. *Oncogene* **32(44)**, 5241-5252 (2013).

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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