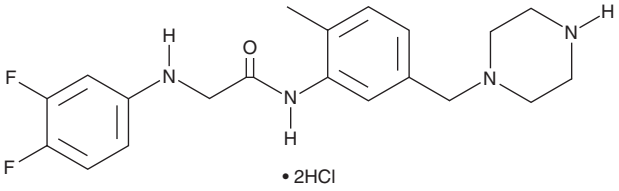
PRODUCT INFORMATION

GW 791343

Item No. 32882

CAS Registry No.:	1019779-04-4
Formal Name:	2-[(3,4-difluorophenyl)amino]-N-[2-methyl-5-(1-piperazinylmethyl)phenyl]-acetamide, dihydrochloride
MF:	$C_{20}H_{24}F_2N_4O \bullet 2HCl$
FW:	447.4
Purity:	≥98%
UV/Vis.:	λ_{max}: 235 nm
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

GW 791343 is supplied as a crystalline solid. A stock solution may be made by dissolving the GW 791343 in the solvent of choice, which should be purged with an inert gas. GW 791343 is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of GW 791343 in these solvents is approximately 1 and 10 mg/ml, respectively.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of GW 791343 can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of GW 791343 in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

GW 791343 is an allosteric modulator of the purinergic $P2X_7$ receptor.[1] It acts as a negative allosteric modulator at human $P2X_7$ receptors but as a positive allosteric modulator at rat $P2X_7$ receptors. GW 791343 (10 and 30 µM) reduces ethidium accumulation induced by the P2X receptor agonists ATP (Item No. 14498) or BzATP (Item No. 15577) in HEK293 cells expressing the human receptor. In contrast, it increases ethidium accumulation induced by ATP or BzATP in HEK293 cells expressing the rat receptor when used at the same concentrations. GW 791343 (5 µM) potentiates the circadian release of ATP in rat organotypic suprachiasmatic nucleus (SCN) slice cultures.[2]

References

1. Michel, A.D., Chambers, L.J., and Walter, D.S. Negative and positive allosteric modulators of the $P2X_7$ receptor. *Br. J. Pharmacol.* **153(4)**, 737-750 (2008).
2. Svobodova, I., Bhattaracharya, A., Ivetic, M., *et al.* Circadian ATP Release in Organotypic Cultures of the Rat Suprachiasmatic Nucleus Is Dependent on $P2X_7$ and P2Y Receptors. *Front. Pharmacol.* **9**, 192 (2018).

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