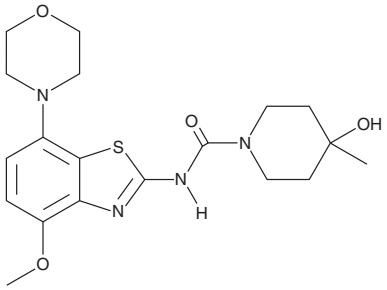
PRODUCT INFORMATION

Tozadenant

Item No. 28452

CAS Registry No.:	870070-55-6
Formal Name:	4-hydroxy-N-[4-methoxy-7-(4-morpholinyl)-2-benzothiazolyl]-4-methyl-1-piperidinecarboxamide
MF:	$C_{19}H_{26}N_4O_4S$
FW:	406.5
Purity:	≥98%
UV/Vis.:	λ_{max}: 255, 284 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

Tozadenant is supplied as a crystalline solid. A stock solution may be made by dissolving the tozadenant in the solvent of choice, which should be purged with an inert gas. Tozadenant is soluble in the organic solvent dimethyl formamide (DMF) at a concentration of approximately 2 mg/ml.

Tozadenant is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, tozadenant should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Tozadenant has a solubility of approximately 0.2 mg/ml in a 1:4 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Tozadenant is an adenosine A_{2A} receptor antagonist (K_is = 11.5 and 6 nM for the human and rhesus monkey receptors, respectively).[1] It increases the distance traveled and reduces contralateral asymmetry in the open field test in a rat model of Parkinson's disease induced by 6-OHDA (Item No. 25330) when administered at a dose of 30 mg/kg.[2] Tozadenant (150 mg/kg) reverses locomotor deficits and restores novel object-stimulated locomotion in a marmoset model of MPTP-induced Parkinson's disease.[3]

References

1. Barret, O., Hannestad, J., Alagille, D., *et al.* Adenosine 2A receptor occupancy by tozadenant and preladenant in rhesus monkeys. *J. Nucl. Med.* **55(10),** 1712-1718 (2014).
2. Michel, A., Downey, P., Van Damme, X., *et al.* Behavioural assessment of the A_{2a}/NR2B combination in the unilateral 6-OHDA-lesioned rat model: A new method to examine the therapeutic potential of non-dopaminergic drugs. *PLoS One* **10(8),** e0135949 (2015).
3. Michel, A., Nicolas, J.M., Rose, S., *et al.* Antiparkinsonian effects of the "Radiprodil and Tozadenant" combination in MPTP-treated marmosets. *PLoS One* **12(8),** e0182887 (2017).

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