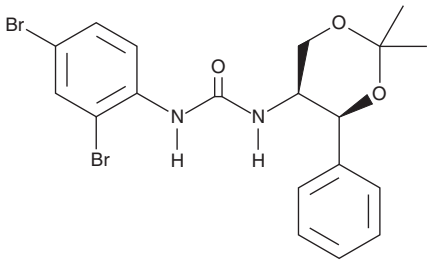
PRODUCT INFORMATION

JNJ-10397049

Item No. 14139

CAS Registry No.:	708275-58-5
Formal Name:	N-(2,4-dibromophenyl)-N'-[(4S,5S)-2,2-dimethyl-4-phenyl-1,3-dioxan-5-yl]-urea
MF:	$C_{19}H_{20}Br_2N_2O_3$
FW:	484.2
Purity:	≥98%
UV/Vis.:	λ_{max}: 251 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥2 years



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

Laboratory Procedures

JNJ-10397049 is supplied as a crystalline solid. A stock solution may be made by dissolving the JNJ-10397049 in the solvent of choice, which should be purged with an inert gas. JNJ-10397049 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of JNJ-10397049 in ethanol and DMSO is approximately 30 mg/ml and approximately 50 mg/ml in DMF.

JNJ-10397049 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, JNJ-10397049 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. JNJ-10397049 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

JNJ-10397049 is a potent, selective, and bioavailable antagonist of the orexin-2 receptor (OX2R) (K_B = 4.5 nM for OX2R *versus* 1.1 µM for OX1R).[1-3] It has no significant affinity for over 50 other neurotransmitters or neuropeptide receptors.[1] Applied subcutaneously to rats, JNJ-10397049 decreases the latency to persistent sleep and increases persistent sleep time.[1] This compound produces a widespread attenuation of D-amphetamine-induced relative cerebrovascular signal, with prominent cortical involvement, in rat brains assessed by functional magnetic resonance imaging.[4]

References

1. Dugovic, C., Shelton, J.E., Aluisio, L.E., *et al.* Blockade of orexin-1 receptors attenuates orexin-2 receptor antagonism-induced sleep promotion in the rat. *J. Pharmacol. Exp. Ther.* **330(1)**, 142-151 (2009).
2. Faedo, S., Perdonà, E., Antolini, M., *et al.* Functional and binding kinetic studies make a distinction between OX1 and OX2 orexin receptor antagonists. *Eur. J. Pharmacol.* **692(1-3)**, 1-9 (2012).
3. Tran, D.T., Bonaventure, P., Hack, M., *et al.* Chimeric, mutant orexin receptors show key interactions between orexin receptors, peptides and antagonists. *Eur. J. Pharmacol.* **667(1-3)**, 120-128 (2011).
4. Gozzi, A., Turrini, G., Piccoli, L., *et al.* Functional magnetic resonance imaging reveals different neural substrates for the effects of orexin-1 and orexin-2 receptor antagonists. *PLoS One* **6(1)**, e16406 (2011).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.**CAYMANCHEM**.COM