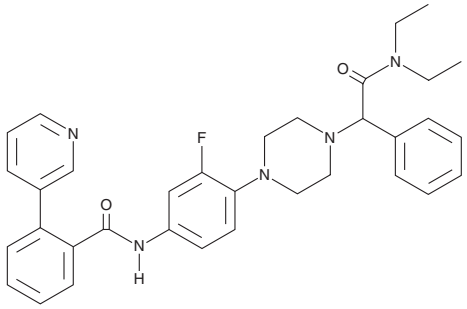
PRODUCT INFORMATION

JNJ-31020028

Item No. 18407

CAS Registry No.:	1094873-14-9
Formal Name:	N,N-diethyl-4-[2-fluoro-4-[[2-(3-pyridinyl)benzoyl]amino]phenyl]-α-phenyl-1-piperazineacetamide
MF:	$C_{34}H_{36}FN_5O_2$
FW:	565.7
Purity:	≥95%
UV/Vis.:	λ_{max}: 267 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

JNJ-31020028 is supplied as a crystalline solid. A stock solution may be made by dissolving the JNJ-31020028 in the solvent of choice, which should be purged with an inert gas. JNJ-31020028 is soluble in the organic solvent DMSO at a concentration of approximately 10 mg/ml.

Description

JNJ-31020028 is a brain-permeable selective antagonist of the neuropeptide Y (NPY) receptor Y_2 (IC_{50}s = 8.51, 6.03, and 6.17 nM for human, rat, and mouse receptors, respectively) with over 100-fold selectivity for Y_2 over Y_1, Y_4, and Y_5 receptors.[1,2] JNJ-31020028 inhibits calcium release induced by peptide YY in a functional assay in KAN-TS cells (pK_B = 8.04) and blocks NPY(13-36)-induced decreases in twitch contraction amplitude in isolated rat vas deferens (IC_{50} = 7.94 nM).[1] Administration of JNJ-31020028 to rats during abstinence (20 mg/kg per day, i.p.) reverses nicotine-induced social anxiety-like behavior and increases hippocampal Y_2 receptor mRNA levels.[3] It reverses withdrawal-induced anxiety-like behavior in rats in the elevated plus maze following a single bolus dose of alcohol when administered at a dose of 15 mg/kg.[4] In an olfactory bulbectomized rat model of depression, chronic JNJ-31020028 treatment (10 nmol per day, i.c.v.) decreases immobility time in the forced swim test but has no effect in control animals.[5]

References

1. Shoblock, J.R., Welty, N., Nepomuceno, D., *et al. Psychopharmacology (Berl)* **208(2)**, 265-277 (2010).
2. Swanson, D.M., Wong, V.D., Jablonowski, J.A., *et al. Bioorg. Med. Chem. Lett.* **21(18)**, 5552-5556 (2011).
3. Aydin, C., Oztan, O., and Isgor, C. *Behav. Brain Res.* **222(2)**, 332-341 (2011).
4. Cippitelli, A., Rezvani, A.H., Robinson, J.E., *et al. Alcohol* **45(6)**, 567-576 (2011).
5. Morales-Medina, J.C., Dumont, Y., Bonaventure, P., *et al. Neuropeptides* **46(6)**, 329-334 (2012).

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