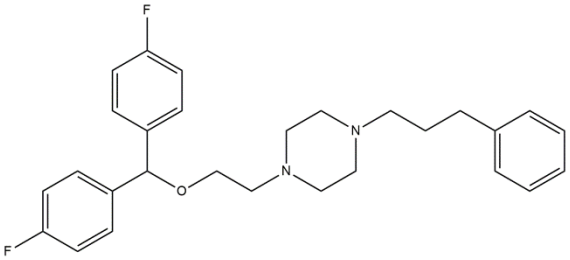
# GBR-12909

*06/20*

**ALTERNATE NAMES:** Vanorexine; Vanoxerin; 1-[2-[bis(4-fluorophenyl)methoxy]ethyl]-4-(3-phenylpropyl)piperazine; Vanoxerina; Vanoxerinum

**CATALOG #:**
B3043-5 5 mg
B3043-25 25 mg

**STRUCTURE:**




**MOLECULAR FORMULA:** $C_{28}H_{32}F_2N_2O$

**MOLECULAR WEIGHT:** 450.56

**CAS NUMBER:** 67469-69-6

**APPEARANCE:** Solid powder

**PURITY:** ≥98%

**SOLUBILITY:** Soluble in DMSO

**DESCRIPTION:** GBR-12909 is a potent and selective inhibitor of dopamine uptake ($K_i$ = 1 nM). It inhibits dopamine uptake in tissue slices obtained from rat neostriatum at nanomolar concentrations. GBR-12909 (10 mg/kg IP) produces a dose-dependent decrease in the binding of cocaine to the dopamine transporter in rats. It antagonizes the ability of cocaine to elevate extracellular dopamine. It is also a potent blocker of cardiac hERG, sodium and calcium channels and shows cardiac antiarrhythmic properties. It is a potent ligand for sigma receptor. Regulators of sigma receptors are suggested to show activity against COVID-19, based on viral assay screens.

**STORAGE TEMPERATURE:** -20ºC

**HANDLING:** Do not take internally. Wear gloves and mask when handling the product! Avoid contact by all modes of exposure.

**REFERENCES:**

1. Heikkila, R.E., and Manzino, L. Behavioral properties of GBR 12909, GBR 13069 and GBR 13098: Specific inhibitors of dopamine uptake. European Journal of Pharmacology 103(3-4), 241-248 (1984).
2. Contreras, P.C., Bremer, M.E., and Rao, T.S. GBR-12909 and fluspirilene potently inhibited binding of [3H](+)3-PPP to sigma receptors in rat brain. Life Sciences 47(22), PL133-PL137 (1990).
3. Rothman, R.B., Mele, A., Reid, A.A. et al. GBR12909 Antagonizes the Ability of Cocaine to Elevate Extracellular Levels of Dopamine. Pharmacol Biochem Behav. 40(2):387-97 (1991).
4. Gordon, D.E., Jang, G.M., Bouhaddou, M. et al. A SARS-CoV-2 protein interaction map reveals targets for drug repurposing. Nature (2020) https://doi.org/10.1038/s41586-020-2286-9.
5. Lacerda AE, Kuryshev YA, Yan G-X et al. Vanoxerine: Cellular Mechanism of a New Antiarrhythmic. J Cardiovasc Electrophysiol. 21(3):301-10 (2010).
6. Andersen, P.H. The dopamine uptake inhibitor GBR 12909: Selectivity and molecular mechanism of action. European Journal of Pharmacology 166(3), 493-504 (1989).

**RELATED PRODUCTS:**

Valbenazine (Cat. No. B2954)
Remdesivir (Cat. No. B2997)
Lanatoside C (Cat. No. B2577)
Digoxin (Cat. No. 2911)
Olanzapine (Cat. No. B2677)

**DISCLAIMER:** ***FOR RESEARCH USE ONLY! Not to be used on humans.***