

Store at
RT

GBR-12909 Dihydrochloride

#61724

10 mg

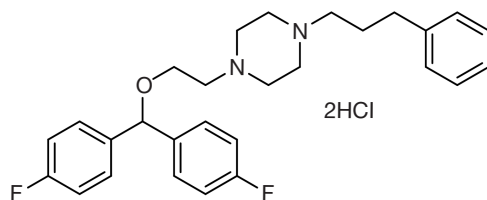
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New 05/20

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Background: GBR-12909 Dihydrochloride is a highly selective synaptosomal dopamine uptake inhibitor ($K_i = 1$ nM), with a 100-fold stronger affinity for the dopamine uptake carrier protein than noradrenaline and serotonin (1). GBR-12909 Dihydrochloride has also been demonstrated to be a strong sigma receptor ligand in rat brain samples with an IC_{50} value of 48 nM (2). This small molecule is considered to be a high-affinity, long-acting dopamine transporter (DAT) inhibitor and *in vivo* models show that intravenous injection of GBR-12909 Dihydrochloride blocks dopamine uptake within 5 seconds, matching the temporal effect of cocaine, with longer-acting and less negative behavioral effects (3). The ability to regulate dopamine uptake makes GBR-12909 Dihydrochloride a compound of interest when studying substance abuse issues like alcohol and cocaine addiction (4,5).

Molecular Formula: $C_{26}H_{32}F_2N_2O \cdot 2HCl$



Molecular Weight: 523.5 g/mol

Purity: >98%

CAS: 67469-78-7

Solubility: Soluble in DMSO at 30 mg/ml or water at 10 mg/ml both with slight warming.

Storage: Store lyophilized at room temperature, desiccated. In lyophilized form, the chemical is stable for 24 months. Once in solution, store at $-20^{\circ}C$ and use within 1 month to prevent loss of potency. *Aliquot to avoid multiple freeze/thaw cycles.*

Directions for Use: GBR-12909 Dihydrochloride is supplied as a lyophilized powder. For a 15 mM stock, reconstitute 10 mg of powder in 1.27 ml of DMSO. Working concentrations and length of treatment can vary depending on the desired effect.

Background References:

- (1) Andersen, P.H. (1989) *Eur J Pharmacol* 166, 493-504.
- (2) Contreras, P.C. et al. (1990) *Life Sci* 47, PL133-7.
- (3) Yorgason, J.T. et al. (2011) *Neuroscience* 182, 125-32.
- (4) Tella, S.R. et al. (1996) *J Neurosci* 16, 7416-27.
- (5) Kamdar, N.K. et al. (2007) *Psychopharmacology (Berl)* 192, 207-17.

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Applications: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide **Species Cross-Reactivity:** H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—Horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.