

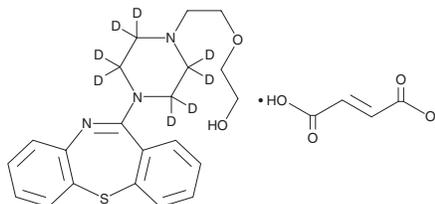
PRODUCT INFORMATION



Quetiapine-d₈ (fumarate)

Item No. 32946

CAS Registry No.: 1185247-12-4
Formal Name: 2-[2-(4-dibenzo[b,f][1,4]thiazepin-11-yl-1-piperazinyl-d₈)ethoxy]-ethanol, 2E-butenedioate
MF: C₂₁H₁₇D₈N₃O₂S • C₄H₄O₄
FW: 507.6
Chemical Purity: 98% (Quetiapine)
Deuterium Incorporation: ≥99% deuterated forms (d₁-d₈); ≤1% d₀
Supplied as: A 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

Quetiapine-d₈ (fumarate) is intended for use as an internal standard for the quantification of quetiapine (Item No. 14152) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

Quetiapine-d₈ (fumarate) is supplied as a solid. A stock solution may be made by dissolving the quetiapine-d₈ (fumarate) in the solvent of choice, which should be purged with an inert gas. Quetiapine-d₈ (fumarate) is soluble in methanol, DMSO, and dimethyl formamide.

Description

Quetiapine is an atypical, second generation antipsychotic compound.¹⁻³ It has effects at multiple receptors, antagonizing dopamine D₁, D₂, and D₃ receptors (K_is = 994, 379, and 340 nM, respectively), serotonin 5-HT_{1A}, 5-HT_{2A}, and 5-HT₇ receptors (K_is = 394, 118, and 307 nM, respectively), and α_{1A}, α_{1B}, and α_{2C} adrenergic receptors (K_is = 22, 15, and 29 nM, respectively).^{4,5} Quetiapine also potently antagonizes the histamine H₁ receptor (K_i = 11 nM).⁵

References

1. Seeman, P. Atypical antipsychotics: Mechanism of action. *Can. J. Psychiatry* **47**(1), 27-38 (2002).
2. Rummel-Kluge, C., Komossa, K., Schwarz, S., et al. Second-generation antipsychotic drugs and extrapyramidal side effects: A systematic review and meta-analysis of head-to-head comparisons. *Schizophr. Bull.* **38**(1), 167-177 (2012).
3. Cerejeira, J. and Mukaetova-Ladinska, E.B. A clinical update on delirium: From early recognition to effective management. *Nurs. Res. Pract.* 875196 (2011).
4. Richelson, E. and Souder, T. Binding of antipsychotic drugs to human brain receptors: Focus on newer generation compounds. *Life Sci.* **68**(1), 29-39 (2000).
5. Kroeze, W.K., Hufeisen, S.J., Popadak, B.A., et al. H1-histamine receptor affinity predicts short-term weight gain for typical and atypical antipsychotic drugs. *Neuropsychopharmacology* **28**(3), 519-526 (2003).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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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