

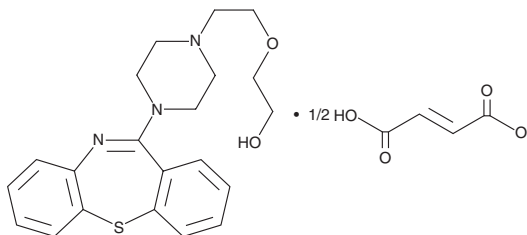
PRODUCT INFORMATION



Quetiapine (hemifumarate)

Item No. 14152

CAS Registry No.: 111974-72-2
Formal Name: 2-[2-(4-dibenzo[b,f][1,4]thiazepin-11-yl-1-piperazinyl)ethoxy]-ethanol, 2E-butenedioate (2:1)
Synonym: ICI 204636
MF: C₂₁H₂₅N₃O₂S • 1/2C₄H₄O₄
FW: 441.5
Purity: ≥95%
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

Quetiapine (hemifumarate) is supplied as a crystalline solid. A stock solution may be made by dissolving the quetiapine (hemifumarate) in the solvent of choice, which should be purged with an inert gas. Quetiapine (hemifumarate) is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of quetiapine (hemifumarate) in these solvents is approximately 10 mg/ml.

Quetiapine (hemifumarate) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, quetiapine (hemifumarate) should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Quetiapine (hemifumarate) has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

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.* **2011** (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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