



# LKT Laboratories, Inc.

## Quetiapine Fumarate

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### Product Information

Product ID Q8019

CAS No. 111974-72-2

Chemical Name

Synonym

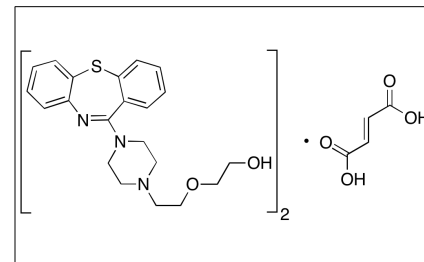
Formula  $2(C_{21}H_{25}N_3O_2S) \cdot C_4H_4O_4$

Formula Wt. 883.09

Melting Point 172-176°C

Purity ≥98%

Solubility



### Pricing and Availability

**Bulk quantities available upon request**

Product ID	Size	List Price
Q8019	1 g	\$72.30
Q8019	5 g	\$258.50
Q8019	25 g	\$516.80

Store Temp Ambient

Ship Temp Ambient

**Description** Quetiapine is a second-generation atypical antipsychotic that is used clinically to treat bipolar disorder, schizophrenia, and depression. Quetiapine inhibits D1/2/3/4 receptors, 5-HT<sub>2A/2C/6/7</sub> receptors, histamine H<sub>1/2</sub> receptors, M<sub>1</sub> muscarinic acetylcholine receptors (mAChRs), and α<sub>1A/1B/2C</sub>-adrenergic receptors and activates σ<sub>1/2</sub> receptors and 5-HT<sub>1A</sub> receptors. Quetiapine's neuromodulatory, cognition enhancing, antipsychotic, antidepressant, antihistamine, and neuroprotective activities stem from its actions at D<sub>2</sub>, 5-HT and histamine H<sub>1/2</sub> receptors. The major metabolite of quetiapine, norquetiapine, also exhibits similar activities but has a different binding profile. When administered in vivo, quetiapine decreases immobility time in the forced swim test. Quetiapine also increases oligodendrocyte maturation and prevents loss of oligodendrocytes and myelin in animal models of cerebral ischemia/reperfusion. Quetiapine also exhibits benefit in the treatment of Alzheimer's disease, suppressing memory impairment in the Y-maze test in transgenic animal models and decreasing age-related loss of brain-derived neurotrophic factor (BDNF).

**References** López-Muñoz F, Alamo C. Active Metabolites as Antidepressant Drugs: The Role of Norquetiapine in the Mechanism of Action of Quetiapine in the Treatment of Mood Disorders. *Front Psychiatry*. 2013 Sep 12;4:102. PMID: 24062697.

Kotagale NR, Mendhi SM, Aglawe MM, et al. Evidences for the involvement of sigma receptors in antidepressant like effect of quetiapine in mice. *Eur J Pharmacol*. 2013 Feb 28;702(1-3):180-6. PMID: 23399765.

Tempier A, He J, Zhu S, et al. Quetiapine modulates conditioned anxiety and alternation behavior in Alzheimer's transgenic mice. *Curr Alzheimer Res*. 2013 Feb;10(2):199-206. PMID: 22950914.

Bi X, Zhang Y, Yan B, et al. Quetiapine prevents oligodendrocyte and myelin loss and promotes maturation of oligodendrocyte progenitors in the hippocampus of global cerebral ischemia mice. *J Neurochem*. 2012 Oct;123(1):14-20. PMID: 22817262.

Ichikawa J, Li Z, Dai J, et al. Atypical antipsychotic drugs, quetiapine, iloperidone, and melperone, preferentially increase dopamine and acetylcholine release in rat medial prefrontal cortex: role of 5-HT<sub>1A</sub> receptor agonism. *Brain Res*. 2002 Nov 29;956(2):349-57. PMID: 12445705.

Richelson E, Souder T. Binding of antipsychotic drugs to human brain receptors focus on newer generation compounds. *Life Sci*. 2000 Nov 24;68(1):29-39. PMID: 11132243.

**Caution:** This product is intended for laboratory and research use only. It is not for human or drug use.