



LKT Laboratories, Inc.

## Oxcarbazepine

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### Product Information

Product ID O9210

CAS No. 28721-07-5

Chemical Name 10,11-Dihydro-10-oxo-5H-dibenz[b,f]azepine-5- carboxamide

Synonym Trileptal

Formula  $C_{15}H_{12}N_2O_2$

Formula Wt. 252.27

Melting Point 215-216°C

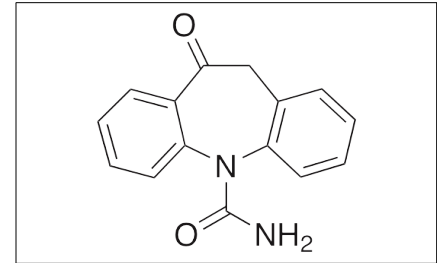
Purity  $\geq 98\%$

Solubility Soluble in DMSO (9mg/mL).

Store Temp Ambient

Ship Temp Ambient

**Description** Oxcarbazepine (OX) is an antiepileptic/anticonvulsant commonly used to treat epilepsy, but also exhibits activity as a treatment for mood disorders and neuropathic pain as well. Administration of oxcarbazepine leads to a reversible reduction in current amplitude from voltage-gated  $Na^+$  channels and may suppress current amplitude of delayed rectifying  $K^+$  channels; this reduces the amplitude of action potentials and prolongs their duration. This compound also inhibits  $Na^+$  channel-dependent Glu release and produces a moderate open channel block on nicotinic acetylcholine receptors (nAChRs), preventing deactivation. Interestingly, oxcarbazepine may have potential as a treatment for substance abuse disorders, as it is moderately effective as a relapse prevention treatment in a clinical trial of recently abstinent alcohol-dependent subjects.



**Bulk quantities available upon request**

Product ID	Size
O9210	1 g
O9210	5 g
O9210	25 g

**References** Di Resta C, Ambrosi P, Curia G, et al. Effect of carbamazepine and oxcarbazepine on wild-type and mutant neuronal nicotinic acetylcholine receptors linked to nocturnal frontal lobe epilepsy. *Eur J Pharmacol.* 2010 Sep 15;643(1):13-20. PMID: 20561518.

Johannessen Landmark C, Johannessen SI. Pharmacological management of epilepsy: recent advances and future prospects. *Drugs.* 2008;68(14):1925-39. PMID: 18778117.

Huang CW, Huang CC, Lin MW, et al. The synergistic inhibitory actions of oxcarbazepine on voltage-gated sodium and potassium currents in differentiated NG108-15 neuronal cells and model neurons. *Int J Neuropsychopharmacol.* 2008 Aug;11(5):597-610. PMID: 18184444.

Sitges M, Chiu LM, Guarneros A, et al. Effects of carbamazepine, phenytoin, lamotrigine, oxcarbazepine, topiramate and vinpocetine on  $Na^+$  channel-mediated release of  $[^3H]$ glutamate in hippocampal nerve endings. *Neuropharmacology.* 2007 Feb;52(2):598-605. PMID: 17070874.

Nishimura M, Nakanishi T, Yasui A, et al. Serum calcium increases the incidence of arrhythmias during acetate hemodialysis. *Am J Kidney Dis.* 1992 Feb;19(2):149-55. PMID: 1739097.

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