

Duloxetine

Catalog No: tcsc2885



Available Sizes

Size: 10mg

Size: 50mg



Specifications

CAS No:

116539-59-4

Formula:

$C_{18}H_{19}NO_2$

Pathway:

Neuronal Signaling

Target:

Serotonin Transporter

Purity / Grade:

>98%

Solubility:

10 mM in DMSO

Alternative Names:

(S)-Duloxetine;LY248686

Observed Molecular Weight:

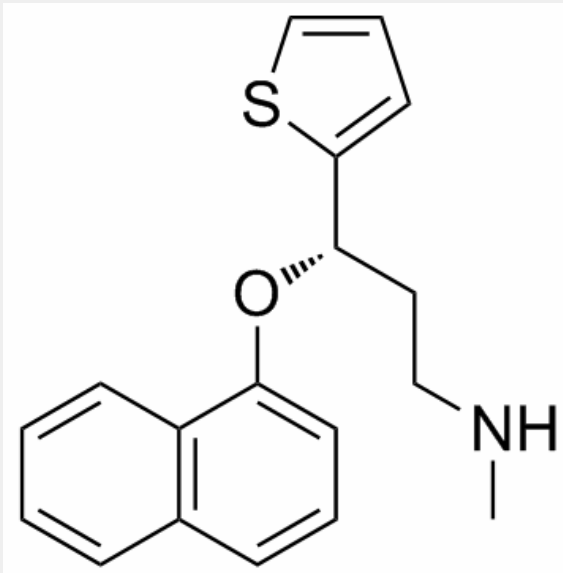
297.41

Product Description

Duloxetine is a serotonin-norepinephrine reuptake inhibitor with K_i of 4.6 nM, used for treatment of major depressive disorder and generalized anxiety disorder (GAD).

Target: SNRIs

Duloxetine inhibits the reuptake of serotonin and norepinephrine in the central nervous system. Duloxetine is also considered a less potent inhibitor of dopamine reuptake. However, duloxetine has no significant affinity for dopaminergic, adrenergic, cholinergic, histaminergic, opioid, glutamate, and GABA receptors and can therefore be considered to be a selective reuptake inhibitor at the 5-HT and NA transporters. Duloxetine undergoes extensive metabolism, but the major circulating metabolites do not contribute significantly to the pharmacologic activity. Major depressive disorder is believed to be due in part to an increase in pro-inflammatory cytokines within the central nervous system. Antidepressants including ones with a similar mechanism of action as duloxetine, i.e. serotonin metabolism inhibition, cause a decrease in proinflammatory cytokine activity and an increase in anti-inflammatory cytokines; this mechanism may apply to duloxetine in its effect on depression but research on cytokines specific to duloxetine therapy is lacking [1]. The analgesic properties of duloxetine in the treatment of diabetic neuropathy and central pain syndromes such as fibromyalgia are believed to be due to sodium ion channel blockade [2].



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