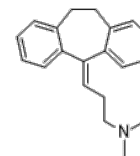


Product Name : Amitriptyline
Cat. No. : PC-28021
CAS No. : 50-48-6
Molecular Formula : C₂₀H₂₃N
Molecular Weight : 277.41
Target : Monoamine Transporter
Solubility : 10 mM in DMSO



Biological Activity

Amitriptyline is a tricyclic antidepressant by blocking **SERT** (K_i=3.45 nM) and **NET** (K_i=13.3 nM), thereby increasing the concentrations of 5-hydroxytryptamine (5-HT) and norepinephrine (NE) in the synaptic cleft, is also an agonist at α₂A and TrkA/TrkB receptors, thereby exerting analgesic and neurotrophic activities.

Amitriptyline binds to DAT (with K_i = 2.58 μM).

Amitriptyline has high affinity for a series of receptors and can antagonize muscarinic cholinergic receptors (M₁/M₂/M₃/M₄/M₅ receptors) (K_i=11-24 nM), H₁ receptors (K_i=0.5-1.1 nM), adrenergic α₁ receptors (K_i=4.4 nM).

Amitriptyline blocks sodium channels and hERG potassium channel (IC₅₀=4.78 μM) and has cardiotoxicity

References

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Caution: Product has not been fully validated for medical applications. Lab Use Only!

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