

L-Phenylalanine

Catalog No: tcsc2315



Available Sizes

Size: 1g



Specifications

CAS No:

63-91-2

Formula:

$C_9H_{11}NO_2$

Pathway:

Membrane Transporter/Ion Channel

Target:

Calcium Channel

Purity / Grade:

>98%

Solubility:

H₂O : ≥ 46 mg/mL (278.47 mM)

Alternative Names:

(S)-2-Amino-3-phenylpropionic acid

Observed Molecular Weight:

165.19

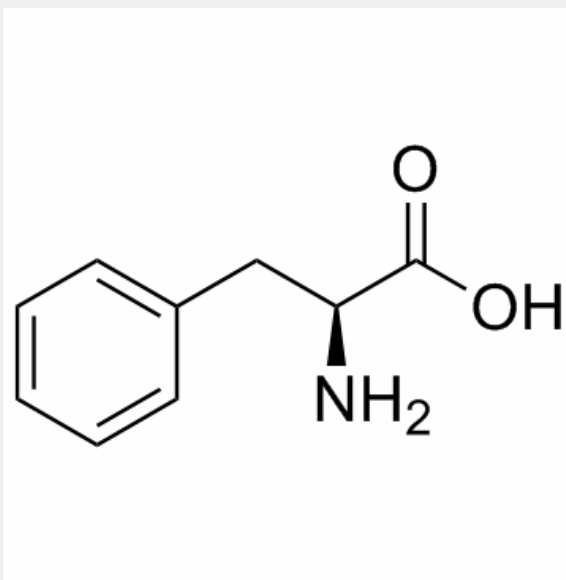
Product Description

L-Phenylalanine is an antagonist at α_{2δ} calcium channels with a K_i of 980 nM.

IC₅₀ Value: 980 nM [1]

Target: Calcium Channel

L-Phenylalanine (LPA) is an electrically neutral amino acid, one of the twenty common amino acids used to biochemically form proteins. In the brain, L-phenylalanine is a competitive antagonist at the glycine binding site of NMDA receptor and at the glutamate binding site of AMPA receptor [2, 3]. At the glycine binding site of NMDA receptor L-phenylalanine has an apparent equilibrium dissociation constant (KB) of 573 M estimated by Schild regression [4] which is considerably lower than brain L-phenylalanine concentration observed in untreated human phenylketonuria [5]. L-Phenylalanine also inhibits neurotransmitter release at glutamatergic synapses in hippocampus and cortex with IC50 of 980 nM, a brain concentration seen in classical phenylketonuria, whereas D-phenylalanine has a significantly smaller effect [3].



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