

Clenbuterol hydrochloride

Catalog No: tcsc6917



Available Sizes

Size: 25mg

Size: 50mg

Size: 100mg

Size: 200mg



Specifications

CAS No:

21898-19-1

Formula:

$C_{12}H_{19}Cl_3N_2O$

Pathway:

GPCR/G Protein

Target:

Adrenergic Receptor

Purity / Grade:

>98%

Solubility:

DMSO : ≥ 125 mg/mL (398.53 mM)

Alternative Names:

NAB-365 hydrochloride

Observed Molecular Weight:

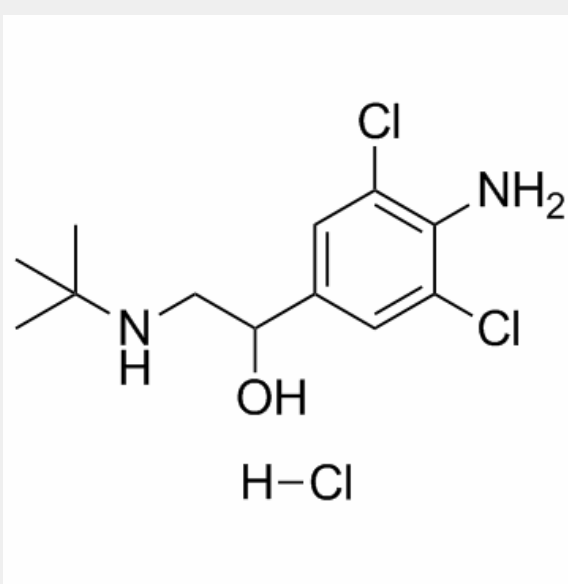
313.65

Product Description

Clenbuterol hydrochloride (NAB-365 hydrochloride) is a **β₂ adrenergic receptor** agonist. It is a powerful bronchodilator with fat burning properties.

In Vitro: Clenbuterol increases lipolysis in rat primary adipocytes compared with control. Free glycerol release into the culture medium is 158% and 190% of control values in cultures containing 0.1, or 1 μM Clenbuterol, respectively^[1].

In Vivo: Clenbuterol has been shown to decrease body fat in animals and can induce apoptosis in adipose tissue in mice^[1]. In red and white muscles, Clenbuterol induces reductions in mitochondrial content, proteins involved in fatty acid transport oxidation, glucose transport, lactate transport, monocarboxylate transporter, and pyruvate oxidation. These extensive metabolic changes induced by Clenbuterol are associated with reductions in PGC-1α and increases in RIP140^[2]. Repeated administration of the centrally acting beta adrenoceptor agonist, Clenbuterol, to rats reduces the ability of isoproterenol to increase the concentration of cyclic AMP (cAMP) in slices of cerebellum. This reduced responsiveness to isoproterenol is accompanied by a marked reduction in the density of beta adrenoceptors^[3]. In normal soleus muscle, Clenbuterol treatment stimulates protein synthesis, inhibits Ca²⁺-dependent proteolysis, and increases the levels of calpastatin protein. On the other hand, the administration of Clenbuterol to DEN rats ameliorates the loss of muscle mass, enhances the rate of protein synthesis, attenuates hyperactivation of proteasomal and lysosomal proteolysis, and suppresses the transcription of the lysosomal protease cathepsin L and of atrogin-1/MAFbx and MuRF1^[4].



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