

## **Certificate of Analysis**

Catalog Number	BP12909
Product Name	Latrepirdine dihydrochloride

## **Physical and Chemical Properties**

Synonyms	Dimebolin, Latrepirdine 2HCl, Dimebolin dihydrochloride, Latrepirdine
CAS No.	97657-92-6
Chemical Formula	C21H27Cl2N3
Molecular Weight	392.37
Solubility	DMSO: 39.2 mg/mL (100 mM)
Storage	Powder: -20°C for 2 years In solvent: -80°C for 1 year
Chemical Structure OR Tested Image	

## **Product Information**

Description	Latrepirdine is an orally active, and neuroactive antagonist of multiple drug targets, including histamine receptors, GluR, and 5-HT receptors, used as an antihistamine drug.
In vitro	Latrepirdine increases succinate dehydrogenase activity (MTT-assay), mitochondrial membrane potential (DeltaPsim), and cellular ATP levels in primary mouse cortical neurons and human neuroblastoma cells (SH-SY5Y). Latrepirdine enhances mitochondrial function both in the absence and presence of stress and Dimebon-treated cells are partially protected to maintain cell viability. Latrepirdine leads to enhanced mTOR- and Atg5-dependent autophagy in cultured mammalian cells. latrepirdine stimulates MTOR- and ATG5-dependent autophagy, leading to the reduction of intracellular levels of APP metabolites, including A $\beta$ in cultured cells. Latrepirdine stimulates the degradation of $\alpha$ -syn in differentiated SH-SY5Y neurons, and in mouse brain following chronic administration, in parallel with elevation of the levels of markers of autophagic activity. Latrepirdine increases intracellular ATP levels and glucose transporter 3 translocation to the plasma membrane in primary neuron.
In vivo	Latrepirdine treatment of TgCRND8 transgenic mice is associated with improved learning behavior and with a reduction in accumulation of A $\beta$ 42 and $\alpha$ -synuclein. Latrepirdine administration results in increased levels of the biomarkers thought to correlate with autophagy activation in the brains of TgCRND8 (APP K670M, N671L, V717F) or wild-type mice, and that treatment is associated with abrogation of behavioral deficit, reduction in A $\beta$ neuropathology, and prevention of autophagic failure among TgCRND8 mice.

## Analytical Data

HPLC	Shows Min >99% purity
H-NMR	Consistent with structure
Stability and Solubility Advice	Information on product stability, especially in solution, has rarely been reported and in most cases we can only provide a general guideline. We recommend that once the stock solution has been prepared, it be stored in equal quantities in sealed vials and used within 1 month. Avoid repeated freezing and thawing cycles. Storage conditions for some special products should be referred to their storage details.

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