Certificate of Analysis

Product Name: **Dihydro-β-erythroidine hydrobromide** **Catalog No.: 2349** **Batch No.: 11**

CAS Number: 29734-68-7

IUPAC Name: (2*S*,13b*S*)-2-Methoxy-2,3,5,6,8,9,10,13-octahydro-1*H*,12*H*-benzo[*i*]pyrano[3,4-*g*]indolizin-12-one hydrobromide

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{16}H_{21}NO_3.HBr$

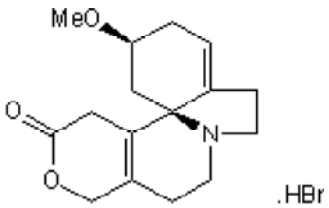
Batch Molecular Weight: 356.26

Physical Appearance: White solid

Solubility: water to 100 mM
DMSO to 25 mM

Storage: Desiccate at RT

Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.45 (Chloroform:Methanol [9:1])

HPLC: Shows 98.1% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Optical Rotation: $[\alpha]_D$ = +106.8 (Concentration = 1, Solvent = Water)

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	53.94	6.22	3.93
Found	53.96	6.29	3.91

bio-techne.com
info@bio-techne.com
techsupport@bio-techne.com

North America
Tel: (800) 343 7475

China
info.cn@bio-techne.com
Tel: +86 (21) 52380373

Europe Middle East Africa
Tel: +44 (0)1235 529449

Rest of World
www.tocris.com/distributors
Tel:+1 612 379 2956

Product Name: **Dihydro-β-erythroidine hydrobromide** **Catalog No.: 2349** **Batch No.: 11**

CAS Number: 29734-68-7

IUPAC Name: (2*S*,13b*S*)-2-Methoxy-2,3,5,6,8,9,10,13-octahydro-1*H*,12*H*-benzo[*i*]pyrano[3,4-*g*]indolizin-12-one hydrobromide

Description:

Dihydro-β-erythroidine hydrobromide is a member of the Erythrina alkaloids, it is a competitive nicotinic acetylcholine receptor antagonist with moderate selectivity for the neuronal α4 receptor subunit (IC_{50} values are 0.19 and 0.37 μM for α4β4 and α4β2 receptors respectively). Antagonizes behavioral effects of nicotine in vivo. Dihydro-?-erythroidine blocks excitation of striatal GABAergic neurons, which completely suppress polysynaptic inhibition between striatal cholinergic Interneurons. Dihydro-?-erythroidine hydrobromide has antidepressive-like effects in mice (forced swim and mouse suspension). Orall... Please see product specific page on www.tocris.com for full description.

Physical and Chemical Properties:

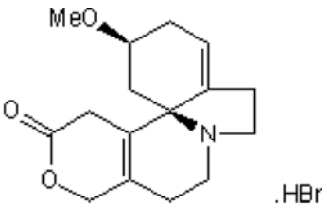
Batch Molecular Formula: $C_{16}H_{21}NO_3$.HBr

Batch Molecular Weight: 356.26

Physical Appearance: White solid

Minimum Purity: ≥98%

Batch Molecular Structure:



Storage: Desiccate at RT

Solubility & Usage Info:

water to 100 mM
DMSO to 25 mM

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Dorst *et al* (2020) Polysynaptic inhibition between striatal cholinergic interneurons shapes their network activity patterns in a dopamine-dependent manner. Nat.Commun ***11*** 5133. PMID: 33037215.

Andreasen *et al* (2009) Antidepressant-like effects of nicotinic acetylcholine receptor antagonists, but not agonists, in the mouse forced swim and mouse tail suspension tests. J.Psychopharmacol. ***23*** 797. PMID: 18583432.

Sullivan *et al* (2008) Recurrent Inhibitory Network among Striatal Cholinergic Interneurons. J.Neurosci. ***28*** 8682. PMID: 18753369.