Certificate of Analysis

Product Name: **SL 327** **Catalog No.: 1969** **Batch No.: 4**

CAS Number: 305350-87-2

IUPAC Name: α-[Amino[(4-aminophenyl)thio]methylene]-2-(trifluoromethyl)benzeneacetonitrile

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{16}H_{12}F_3N_3S$

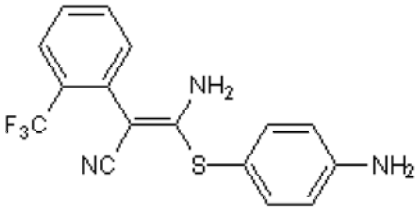
Batch Molecular Weight: 335.35

Physical Appearance: White solid

Solubility: ethanol to 50 mM
DMSO to 100 mM

Storage: Desiccate at +4°C

Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.24 (Ethyl acetate:Petroleum ether [1:1])

HPLC: Shows 99.6% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	57.31	3.61	12.53
Found	57.22	3.8	12.51

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Description:

Selective inhibitor of MEK1 and MEK2 (IC_{50} values are 0.18 and 0.22 μM respectively); blocks hippocampal LTP in vitro. Brain penetrant in vivo, blocking fear conditioning and learning in rats, and producing neuroprotection in mice, following systemic administration.

Physical and Chemical Properties:

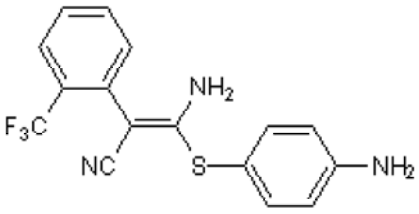
Batch Molecular Formula: $C_{16}H_{12}F_3N_3S$

Batch Molecular Weight: 335.35

Physical Appearance: White solid

Minimum Purity: >99%

Batch Molecular Structure:



Storage: Desiccate at +4°C

CAUTION - This product is light sensitive and we recommend that the solid material and any solutions obtained are protected from exposure to light.

Solubility & Usage Info:

ethanol to 50 mM
DMSO to 100 mM

When purchsed as a 1mg unit, this product is supplied as a lyophilized solid and may be very hard to visualize. Solutions should be made by adding solvent directly to the vial. The vial should then be vortexed vigorously to ensure the product has completely dissolved.

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:

Wang *et al* (2003) Significant neuroprotection against ischemic brain injury by inhibition of the MEK1 protein kinase in mice: exploration of potential mechanism associated with apoptosis. J.Pharmacol.Exp.Ther. ***304*** 172. PMID: 12490588.

Davis *et al* (2000) The MAPK/ERK cascade targets both Elk-1 and cAMP response element-binding protein to control long-term potentiation-dependent gene expression in the dentate gyrus *in vivo*. J.Neurosci. ***20*** 4563. PMID: 10844026.

Scherle *et al* (2000) Regulation of cyclooxygenase-2 induction in the mouse uterus during decidualization. An event of early pregnancy. J.Biol.Chem. ***275*** 37086. PMID: 10969080.

Atkins *et al* (1998) The MAPK cascade is required for mammalian associative learning. Nature Neurosci. ***1*** 602.

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