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TOCRIS

Print Date: Mar 12th 2024

Certificate of Analysis

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Product Name: **KYL** **Catalog No.: 5290** **Batch No.: 6**

CAS Number: 676657-00-4

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{74}H_{108}N_{14}O_{17}$

Batch Molecular Weight: 1465.75

Physical Appearance: White lyophilised solid

Counter Ion: TFA

Solubility: Soluble to 2 mg/ml in water

Storage: Store at -20°C

Peptide Sequence: Lys-Tyr-Leu-Pro-Tyr-Trp-Pro-Val-Leu-Ser-Ser-Leu

2. ANALYTICAL DATA

HPLC: Shows 98.3 % purity

Mass Spectrum: Consistent with structure

3. AMINO ACID ANALYSIS DATA

Amino Acid	Theoretical	Actual	Amino Acid	Theoretical	Actual
Ala			Lys	1.00	0.98
Arg			Met		
Asx			Phe		
Cys			Pro	2.00	2.01
Glx			Ser	2.00	2.01
Gly			Thr		
His			Trp	1.00	Detected
Ile			Tyr	2.00	2.00
Leu	3.00	2.90	Val	1.00	0.98

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Product Name: **KYL** **Catalog No.: 5290** **6**

CAS Number: 676657-00-4

Description:

KYL is an EphA4 receptor tyrosine kinase inhibitor (K_d = 0.8 μM); inhibits EphA4-EphrinA5 interactions (IC_{50} = 6.34 μM). Prevents AβO induced synaptic damage, dendritic spine loss and prevents the blocking of LTP in hippocampal CA3-CA1 transmissions. Exhibits a long half life in cell culture media (8 and 12 hours in PC3 and C2C12 media respectively). Neuroprotective.

Physical and Chemical Properties:

Batch Molecular Formula: $C_{74}H_{108}N_{14}O_{17}$

Batch Molecular Weight: 1465.75

Physical Appearance: White lyophilised solid

Peptide Sequence:

Lys-Tyr-Leu-Pro-Tyr-Trp-Pro-Val-Leu-Ser-Ser-Leu

Storage: Store at -20°C

Solubility & Usage Info:

Soluble to 2 mg/ml in water

This product is supplied in lyophilized form. It may appear as a solid, gel or film and 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.

Counter Ion: TFA

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).

Peptides in solution are much less stable than in lyophilized form. This is especially true for peptides whose sequences contain amino acids such Cys, Met,Trp, Asn, Gln, and N-terminal Glu.

Therefore we recommend storing peptides in solution for as short a time as possible. Avoid repeated freeze thaw cycles by dividing the peptide solution into aliquots and storing the aliquots at -20°C. Any portion of an aliquot unused after thawing should be discarded.

Peptides stored in solution can occasionally be susceptible to bacterial degradation. We recommend using sterile solutions or passing the peptide solution through a 0.2 μm filter to remove potential bacterial contamination whenever possible.

References:

Vargas *et al* (2014) EphA4 activation of c-Abl mediates synaptic loss and LTP blockade caused by amyloid-β oligomers. PLoS One. ***9*** e92309. PMID: 24658113.

Lamberto *et al* (2012) Distinctive binding of three antagonistic peptides to the ephrin-binding pocket of the EphA4 receptor. Biochem. J. ***445*** 47. PMID: 22489865.