

Product Name: ANA 12

Catalog No.: 4781

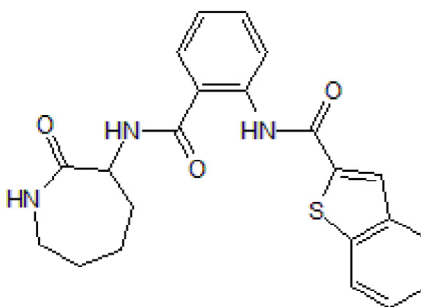
Batch No.: 4

CAS Number: 219766-25-3

IUPAC Name: *N*-[2-[[*(*Hexahydro-2-oxo-1*H*-azepin-3-yl)amino]carbonyl]phenyl]benzo[*b*]thiophene-2-carboxamide

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₂₂H₂₁N₃O₃S.
Batch Molecular Weight: 407.49
Physical Appearance: White solid
Solubility: DMSO to 20 mM
Storage: Store at +4°C
Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.9% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure
Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	64.85	5.19	10.31
Found	64.52	5.02	10.05

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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Description:

ANA 12 is a TrkB receptor antagonist. Demonstrates a 2-site mode of action, preventing activation by BDNF non-competitively (IC₅₀ values are 45.6 nM and 41.1 μM for the high and low affinity sites respectively). Displays no effect on TrkA and TrkC in an assay of neurite outgrowth. Demonstrates antidepressant properties. Also exhibits anti-seizure effects in an ischemia-induced neonatal seizure model by blocking down-regulation of KCC2.

Physical and Chemical Properties:

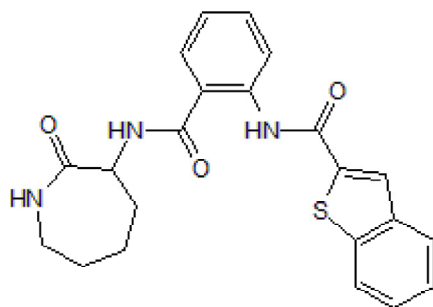
Batch Molecular Formula: C₂₂H₂₁N₃O₃S.

Batch Molecular Weight: 407.49

Physical Appearance: White solid

Minimum Purity: ≥98%

Batch Molecular Structure:



Storage: Store at +4°C

Solubility & Usage Info:

DMSO to 20 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. *Unless contradicted by product-specific protocols or instructions, our standard recommendations apply:

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:

Carter *et al* (2018) Dose-dependent reversal of KCC2 hypofunction and phenobarbital-resistant neonatal seizures by ANA12. *Sci.Rep.* **8** 11987. PMID: 30097625.

Cazorla *et al* (2011) Identification of a low-molecular weight TrkB antagonist with anxiolytic and antidepressant activity in mice. *J.Clin.Invest.* **121** 1846. PMID: 21505263.

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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