

Certificate of Analysis

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Product Name: TGN 020

Catalog No.: 5425

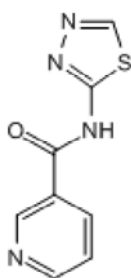
Batch No.: 3

CAS Number: 51987-99-6

IUPAC Name: *N*-1,3,4-Thiadiazol-2-yl-3-pyridinecarboxamide

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₈H₆N₄OS
Batch Molecular Weight: 206.22
Physical Appearance: White solid
Solubility: DMSO to 20 mM
Storage: Store at RT
Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 100% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	46.59	2.93	27.17
Found	46.63	2.91	27.04

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

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CAS Number: 51987-99-6

IUPAC Name: N-1,3,4-Thiadiazol-2-yl-3-pyridinecarboxamide

Description:

TGN 020 is an aquaporin 4 (AQP4) channel blocker ($IC_{50} = 3.1 \mu M$). Increases regional cerebral blood flow and reduces ischemia-induced brain edema in mice.

Physical and Chemical Properties:

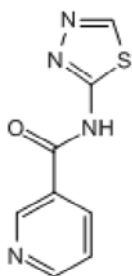
Batch Molecular Formula: $C_8H_6N_4OS$

Batch Molecular Weight: 206.22

Physical Appearance: White solid

Minimum Purity: $\geq 98\%$

Batch Molecular Structure:



Storage: Store at RT

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. 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:

Igarashi et al (2013) Inhibition of aquaporin-4 significantly increases regional cerebral blood flow. *Neuroreport* **24** 324. PMID: 23462267.

Igarashi and Huber (2011) Pretreatment with a novel aquaporin 4 inhibitor, TGN-020, significantly reduces ischemic cerebral edema. *Neurol.Sci.* **32** 113. PMID: 20924629.

Huber et al (2009) Identification of aquaporin 4 inhibitors using *in vitro* and *in silico* methods. *Bioorg.Med.Chem.* **17** 411. PMID: 18182301.

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