TOCRIS
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Print Date: Jan 14th 2016

Certificate of Analysis

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Product Name: **T16Ainh - A01** **Catalog No.: 4538** **Batch No.: 1**

CAS Number: 552309-42-9

IUPAC Name: 2-[(5-Ethyl-1,6-dihydro-4-methyl-6-oxo-2-pyrimidinyl)thio]-*N*-[4-(4-methoxyphenyl)-2-thiazolyl]acetamide

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{19}H_{20}N_4O_3S_2$

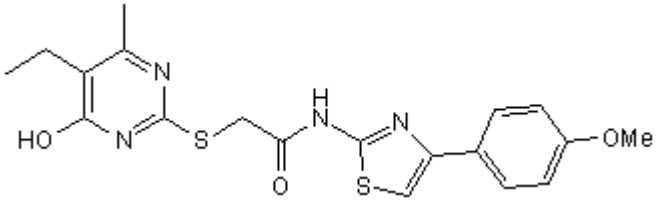
Batch Molecular Weight: 416.52

Physical Appearance: Off-white solid

Solubility: DMSO to 100 mM

Storage: Store at +4°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 98.5% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	54.79	4.84	13.45
Found	54.66	4.82	13.32

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Description:

Inhibitor of Ca^{2+}-dependent Cl^- channel (CaCC) transmembrane protein 16A (TMEM16A) (IC_{50} = 1.8 µM in A253 salivary gland epithelial cells). Inhibits EGF-induced increases in CaCC currents; blocks proliferation of tumor cells in vitro.

Physical and Chemical Properties:

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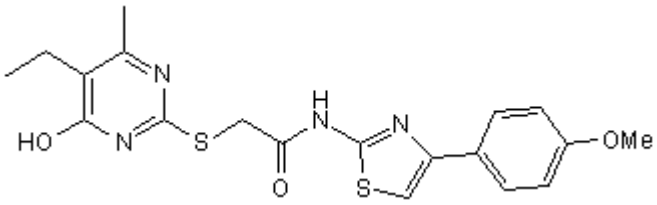
Physical Appearance: Off-white solid

Minimum Purity: >98%

Batch Molecular Structure:



Storage: Store at +4°C

Solubility & Usage Info:

DMSO to 100 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:

Namkung *et al* (2011) TMEM16A inhibitors reveal TMEM16A as a minor component of calcium-activated chloride channel conductance in airway and intestinal epithelial cells. J.Biol.Chem. ***286*** 2365. PMID: 21084298.

Mroz and Keely (2012) Epidermal growth factor chronically upregulates Ca^{2+}-dependent Cl^- conductance and TMEM16A expression in intestinal epithelial cells. J.Physiol. ***590*** 1907. PMID: 22351639.

Duvvuri *et al* (2012) TMEM16A induces MAPK and contributes directly to tumorigenesis and cancer progression. Cancer Res. [Epub ahead of print]. PMID: 22564524.