

Certificate of Analysis

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Product Name: Eact

Catalog No.: 4876

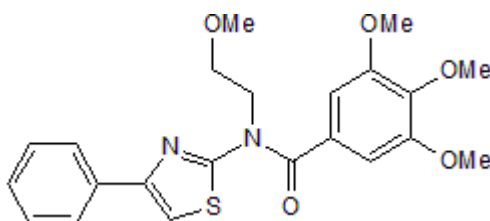
Batch No.: 1

CAS Number: 461000-66-8

IUPAC Name: 3,4,5-Trimethoxy-N-(2-methoxyethyl)-N-(4-phenyl-2-thiazolyl)benzamide

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₂₂H₂₄N₂O₅S
Batch Molecular Weight: 428.5
Physical Appearance: White solid
Solubility: DMSO to 100 mM
ethanol to 10 mM
Storage: Store at +4°C
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	61.67	5.65	6.54
Found	61.33	5.73	6.52

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

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Description:

TMEM16A (ANO1) calcium-activated chloride channel (CaCC) activator ($EC_{50} = 3 \mu\text{M}$). Also transient receptor potential vanilloid 1 (TRPV1) channel activator ($EC_{50} = 11.6 \mu\text{M}$). Ca^{2+} -independent. Displays no effect on CFTR Cl^- or ENaC Na^+ conductance. Stimulates submucosal gland secretion in human bronchi.

Physical and Chemical Properties:

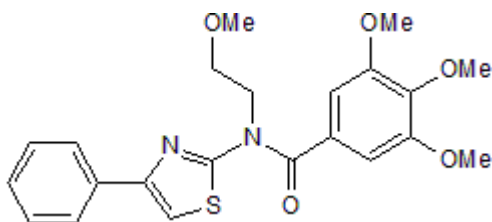
Batch Molecular Formula: $\text{C}_{22}\text{H}_{24}\text{N}_2\text{O}_5\text{S}$

Batch Molecular Weight: 428.5

Physical Appearance: White solid

Minimum Purity: >99%

Batch Molecular Structure:



References:

Liu *et al* (2016) Eact, a small molecule activator of TMEM16A, activates TRPV1 and elicits pain- and itch-related behaviours. *Br.J.Pharmacol.* **173** 1208. PMID: 26756551.

Namkung *et al* (2011) Small-molecule activators of TMEM16A, a calcium-activated chloride channel, stimulate epithelial chloride secretion and intestinal contraction. *FASEB J.* **25** 4048. PMID: 21836025.

Storage: Store at +4°C

Solubility & Usage Info:

DMSO to 100 mM
ethanol to 10 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.

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