

# **Certificate of Analysis**

Print Date: May 29th 2019

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Product Name: GSK 1016790A Catalog No.: 6433 Batch No.: 1

CAS Number: 942206-85-1

 $IUPAC \ Name: \ N-[(1S)-1-[[4-[(2S)-2-[[(2,4-Dichlorophenyl)sulfonyl]amino]-3-hydroxy-1-oxopropyl]-1-piperazinyl] carbonyl]-3-hydroxy-1-oxopropyl]-1-piperazinyl] carbonyl] carbonyl] carbonyl]-1-piperazinyl] carbonyl] car$ 

methylbutyl]benzo[b]thiophene-2-carboxamide

#### 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>28</sub>H<sub>32</sub>Cl<sub>2</sub>N<sub>4</sub>O<sub>6</sub>S<sub>2</sub>

**Batch Molecular Weight:** 655.61 **Physical Appearance:** White solid

Solubility: DMSO to 100 mM

ethanol to 100 mM

Storage: Store at -20°C

**Batch Molecular Structure:** 

#### 2. ANALYTICAL DATA

**HPLC:** Shows 99% purity

<sup>1</sup>H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis: Carbon Hydrogen Nitrogen

Theoretical 51.3 4.92 8.55 Found 51.13 4.96 8.44

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



## **Product Information**

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IUPAC Name: N-[(1S)-1-[[4-[(2S)-2-[[(2,4-Dichlorophenyl)sulfonyl]amino]-3-hydroxy-1-oxopropyl]-1-piperazinyl]carbonyl]-3-hydroxy-1-oxopropyl]-1-piperazinyl]carbonyl]-3-hydroxy-1-oxopropyl]-1-piperazinyl]carbonyl]-3-hydroxy-1-oxopropyl]-1-piperazinyl]carbonyl]-3-hydroxy-1-oxopropyl]-1-piperazinyl]carbonyl]-3-hydroxy-1-oxopropyl]-1-piperazinyl]carbonyl]-3-hydroxy-1-oxopropyl]-1-piperazinyl]carbonyl]-3-hydroxy-1-oxopropyl]-1-piperazinyl]carbonyl]-3-hydroxy-1-oxopropyl]-1-piperazinyl]carbonyl]-3-hydroxy-1-oxopropyl]-1-piperazinyl]carbonyl]-3-hydroxy-1-oxopropyl]-1-piperazinyl]carbonyl]-3-hydroxy-1-oxopropyl]-1-piperazinyl]carbonyl]-3-hydroxy-1-oxopropyl]-1-piperazinyl]carbonyl]-3-hydroxy-1-oxopropyl]-1-piperazinyl]carbonyl]-3-hydroxy-1-oxopropyl]-1-piperazinyl]carbonyl]-3-hydroxy-1-oxopropyl]-1-piperazinyl]carbonyl]-3-hydroxy-1-oxopropyl]-1-piperazinyl]carbonyl]-3-hydroxy-1-oxopropyl]-1-piperazinyl]carbonyl]-1-piperazinyl]carbonyl]-1-piperazinyl[-1-piperazinyl]-1-piperazinyl[-1-piperazinyl]-1-piperazinyl[-1-piperazinyl]-1-piper

methylbutyl]benzo[b]thiophene-2-carboxamide

#### **Description:**

Potent TRPV4 agonist; elicits  $Ca^{2+}$  influx in human and mouse TRPV4-expressing HEK cells (EC<sub>50</sub> values of 2.1 and 18 nM, respectively). Enhances insulin mRNA expression. Increases ERK1/2 phosphorylation and NO production. Exhibits no activity at TRPM8 and TRPA1 (20  $\mu$ M) channels. Induces bladder overactivity in TRPV4+/+ mice.

#### **Physical and Chemical Properties:**

Batch Molecular Formula:  $C_{28}H_{32}CI_2N_4O_6S_2$ 

Batch Molecular Weight: 655.61 Physical Appearance: White solid

**Minimum Purity:** >98%

#### **Batch Molecular Structure:**

Storage: Store at -20°C

#### Solubility & Usage Info:

DMSO to 100 mM ethanol 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:

**Billert** *et al* (2017) TRPV4 regulates insulin mRNA expression and INS-1E cell death via ERK1/2 and NO-dependent mechanisms. Cell Signal. **35** 242. PMID: 28359774.

**Thorneloe** *et al* (2008) *N*-((1*S*)-1-{[4-((2*S*)-2-{[(2,4-dichlorophenyl)sulfonyl]amino}-3-hydroxypropanoyl)-1-piperazinyl]carbonyl}-3-methylbutyl)-1-benzothiophene-2-carboxamide (GSK1016790A), a novel and potent transient receptor potential vanilloid 4 channel agonist induces urinary bladder contraction and hyperactivity: Part I. J.Pharmacol.Exp.Ther. *326* 432. PMID: 18499743.

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