

Certificate of Analysis

Print Date: May 24th 2023

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Product Name: ARN 3236 Catalog No.: 7511 Batch No.: 1

CAS Number: 1613710-01-2

IUPAC Name: 3-(2,4-Dimethoxyphenyl)-4-(3-thienyl)-1*H*-pyrrolo[2,3-*b*]pyridine

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{19}H_{16}N_2O_2S.^3/4H_2O$

Batch Molecular Weight: 349.92 **Physical Appearance:** Beige solid

Solubility: DMSO to 20 mM Storage: Store at -20°C

Batch Molecular Structure:

2. ANALYTICAL DATA

HPLC: Shows 99.5% purity

¹H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis: Carbon Hydrogen Nitrogen

Theoretical 65.22 5.04 8.01 Found 64.77 4.64 7.77

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Product Information

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Description:

ARN 3236 is a potent of salt-inducible kinase 2 (SIK2) inhibitor (IC $_{50}$ values are <1 nM, 6.63 nM and 21.63 nM for SIK2, SIK3 and SIK1 respectively). ARN 3236 inhibits centrosome separation by uncoupling the centrosome from the nucleus. It also induces cell-cycle arrest and apoptosis by attenuating the AKT/survivin pathway. ARN 3236 inhibits growth and enhances Taxol (Cat. No. 1097) sensitivity in ovarian cancer cell lines in vitro and in vivo. In human myeloid cells, ARN 3236 blocks TNF and induces IL-10 upon LPS stimulation; it also reduces the production of IL-1 β upon activation of TLR4 and TLR2 signaling. In depression models,... Please see product specific page on www.tocris.com for full description.

Physical and Chemical Properties:

Batch Molecular Formula: C₁₉H₁₆N₂O₂S.³/₄H₂O

Batch Molecular Weight: 349.92 Physical Appearance: Beige solid

Minimum Purity: ≥98%

Batch Molecular Structure:

OMe OMe

Storage: Store at -20°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:

Liu et al (2021) The selective SIK2 inhibitor ARN-3236 Produces strong antidepressant-like efficacy in mice via the hippocampal CRTC1-CREB-BDNF pathway. Front.Pharmacol. 11 624429. PMID: 33519490.

Zhou *et al* (2017) A novel compound ARN-3236 inhibits salt-inducible kinase 2 and sensitizes ovarian cancer cell lines and xenografts to Paclitaxel. Clin.Cancer Res. **23** 1945. PMID: 27678456.

Lombardi et al (2016) SIK inhibition in human myeloid cells modulates TLR and IL-1R signaling and induces an anti-inflammatory phenotype. J.Leukoc.Biol. **99** 711. PMID: 26590148.

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