

**Product Name:** RSVA 405

**Catalog No.:** 5138

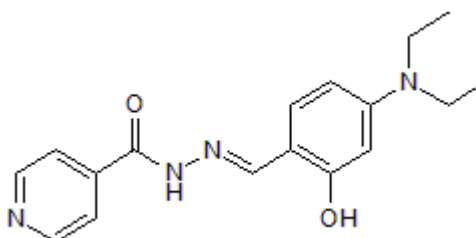
**Batch No.:** 1

**CAS Number:** 140405-36-3

**IUPAC Name:** 2-[[4-(Diethylamino)-2-hydroxyphenyl]methylene]hydrazide-4-pyridinecarboxylic acid

**1. PHYSICAL AND CHEMICAL PROPERTIES**

**Batch Molecular Formula:** C<sub>17</sub>H<sub>20</sub>N<sub>4</sub>O<sub>2</sub>  
**Batch Molecular Weight:** 312.37  
**Physical Appearance:** Yellow solid  
**Solubility:** DMSO to 50 mM  
 ethanol to 5 mM  
**Storage:** Store at -20°C  
**Batch Molecular Structure:**



**2. ANALYTICAL DATA**

**HPLC:** Shows 99.8% purity  
**<sup>1</sup>H NMR:** Consistent with structure  
**Mass Spectrum:** Consistent with structure  
**Microanalysis:**

	Carbon	Hydrogen	Nitrogen
Theoretical	65.37	6.45	17.94
Found	65.09	6.45	17.8

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

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**Description:**

AMP-activated protein kinase (AMPK) activator ( $EC_{50} = 1 \mu\text{M}$ ). Activates AMPK indirectly through a CaMKK-beta dependent mechanism. Inhibits LPS-induced STAT3 phosphorylation ( $IC_{50} = 0.5 \mu\text{M}$ ). Inhibits mTOR signaling, inducing autophagy and A $\beta$  degradation in vitro. Also inhibits adipogenesis of 3T3-L1 adipocytes. Prevents weight gain in an obesity model in vivo.

**Physical and Chemical Properties:**

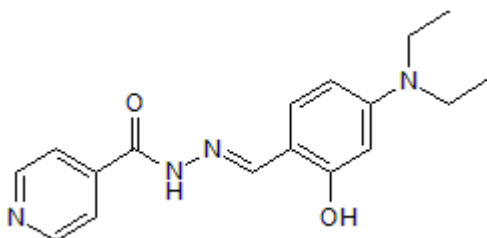
Batch Molecular Formula:  $C_{17}H_{20}N_4O_2$

Batch Molecular Weight: 312.37

Physical Appearance: Yellow solid

**Minimum Purity:** >98%

**Batch Molecular Structure:**



**References:**

**Vingtdeux et al** (2011) Novel synthetic small-molecule activators of AMPK as enhancers of autophagy and amyloid- $\beta$  peptide degradation. *FASEB J.* **25** 219. PMID: 20852062.

**Vingtdeux et al** (2011) Small-molecule activators of AMP-activated protein kinase (AMPK), RSVA314 and RSVA405, inhibit adipogenesis. *Mol Med* **17** 1022. PMID: 21647536.

**Capiralla et al** (2012) Identification of potent small-molecule inhibitors of STAT3 with anti-inflammatory properties in RAW 264.7 macrophages. *FASEB J.* **27** 3791. PMID: 22909341.

**Storage:** Store at  $-20^{\circ}\text{C}$

**CAUTION** - This product is light sensitive and we recommend that the solid material and any solutions obtained are protected from exposure to light.

**Solubility & Usage Info:**

DMSO to 50 mM

ethanol to 5 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  $45\text{-}60^{\circ}\text{C}$  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  $-20^{\circ}\text{C}$  or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

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