



Certificate of Analysis

www.tocris.com

RF 9 **Product Name:** Catalog No.: 3672 Batch No.: 6

CAS Number: 876310-60-0

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{26}H_{38}N_6O_3$ **Batch Molecular Weight:** 482.62

Physical Appearance: White lyophilised solid Solubility: DMSO to 10 mM Store at -20°C Storage:

Batch Molecular Structure:

$$H_2N$$
 H_2N
 H_2N
 H_3N
 H_4N
 H_4N
 H_5N
 H_5N

2. ANALYTICAL DATA

HPLC: Shows 97% purity

Mass Spectrum: Consistent with structure

Tel: +44 (0)1235 529449 www.tocris.com/distributors Tel:+1 612 379 2956



Product Information

Print Date: Feb 28th 2024

www.tocris.com

Product Name: RF 9 Catalog No.: 3672 6

CAS Number: 876310-60-0

Description:

RF 9 is a selective NPFF receptor antagonist (K_i values are 58 and 75 nM at hNPFF $_1$ and hNPFF $_2$ receptors respectively). Displays selectivity over several related receptors including NPY Y $_1$ GPR10, GPR54, GPR103 and the opioid receptors. Blocks NPFF-induced hypothermia and increases in atrial blood pressure and heart rate, and prevents opioid-induced tolerance associated with hyperalgesia in vivo.

Physical and Chemical Properties:

Batch Molecular Formula: C₂₆H₃₈N₆O₃ Batch Molecular Weight: 482.62

Physical Appearance: White lyophilised solid

Minimum Purity: ≥95% Batch Molecular Structure:

$$H_2N$$
 H_2N
 H_3N
 H_4N
 H_5N
 H_5N

Storage: Store at -20°C

Solubility & Usage Info:

DMSO to 10 mM

This product is supplied in lyophilized form. It may appear as a solid, gel or film and be very hard to visualize. Solutions should be made by adding solvent directly to the vial. The vial should then be vortexed vigorously to ensure the product has completely dissolved.

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:

Fang et al (2008) Inhibition of neuropeptide FF (NPFF)-induced hypothermia and anti-morphine analgesia by RF9, a new selective NPFF receptors antagonist. Regul.Peptides 147 45.

Wang et al (2008) Neuropeptide FF receptors antagonist, RF9, attenuates opioid-evoked hypothermia in mice. Peptides 29 1183. PMID: 18406009.

Simonin et al (2006) RF9, a potent and selective neuropeptide FF receptor antagonist, prevents opioid-induced tolerance associated with hyperalgesia. Proc.Natl.Acad.Sci.USA 103 466.

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