

Product Name: YM 254890

Catalog No.: 7352

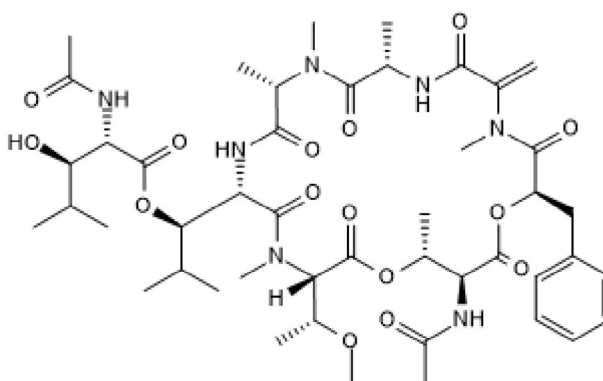
Batch No.: 9

CAS Number: 568580-02-9

IUPAC Name: (R)-1-((3S,6S,9S,12S,18R,21S,22R)-21-acetamido-18-benzyl-3-((R)-1-methoxyethyl)-4,9,10,12,16,22-hexamethyl-15-methylene-2,5,8,11,14,17,20-heptaoxo-1,19-dioxo-4,7,10,13,16-pentaazacyclodocosan-6-yl)-2-methylpropyl (2S,3R)-2-acetamido-3-hydroxy-4-methylpentanoate

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₄₆H₆₉N₇O₁₅
Batch Molecular Weight: 960.09
Physical Appearance: Off White solid
Solubility: DMSO to 10 mM
Storage: Store at -20°C
Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 95.0% purity

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

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Description:

YM 254890 is a G_q-protein inhibitor. Potently inhibits G_{q/11} heterotrimeric G protein signaling. Inhibits ATP/UTP-induced Ca²⁺ increase in HCAE cells expressing P2Y₂ receptor (IC₅₀ = 50 nM); carbachol-induced production of IP₁ in CHO cells expressing M₁ receptor (IC₅₀ = 95 nM); and ADP-induced Ca²⁺ increase in platelets, in vitro (IC₅₀ = 2 μM). Also inhibits G_s-induced cAMP elevation and G protein-coupled MAPK/ERK signaling.

Physical and Chemical Properties:

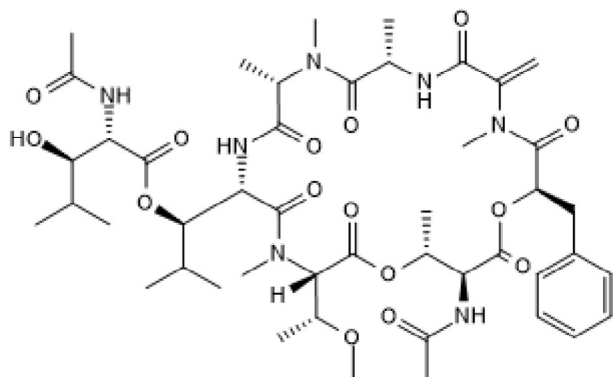
Batch Molecular Formula: C₄₆H₆₉N₇O₁₅

Batch Molecular Weight: 960.09

Physical Appearance: Off White solid

Minimum Purity: ≥95%

Batch Molecular Structure:



References:

Peng et al (2021) Functional evidence for biased inhibition of G protein signaling by YM-254890 in human coronary artery endothelial cells. *Eur.J.Pharmacol.* **891** 173706. PMID: 33152337.

Schlegel et al (2021) Macrocyclic G_q protein inhibitors FR900359 and/or YM-254890-fit for translation? *ACS Pharmacol.Transl.Sci.* **4** 888. PMID: 33860209.

Xiong et al (2019) Structure-activity relationship studies of the natural product G_{q/11} protein inhibitor YM-254890. *Chem.Med.Chem.* **14** 865. PMID: 30790465.

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.

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