

MR 409

## Chemical Properties

CAS No. : 1445155-39-4

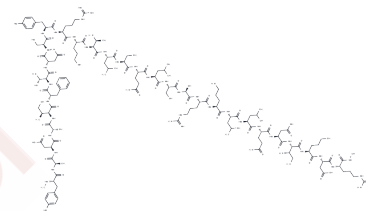
Formula: C153H252N44O43

Molecular Weight: 3395.91

Keep away from moisture

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Actual storage temperature shall be subject to the COA.



## Biological Description

Description	MR 409, a selective growth hormone-releasing hormone (GHRH) agonist, exhibits notable neuroprotective properties by augmenting endogenous neurogenesis in cerebral ischemic mice and demonstrates the ability to inhibit in vivo lung cancer growth [1] [2] [3] [4].
Targets(IC50)	GHSR
In vitro	One week after myocardial infarction (MI), MR 409 (MR-409) significantly diminishes plasma concentrations of IL-2, IL-6, IL-10, and TNF- $\alpha$ compared to placebo [1]. At a concentration of 1 $\mu$ M, MR-409 attenuates p53 expression in bovine pulmonary arterial endothelial cells (BPAECs) and activates JAK2, STAT3, and ERK1/2 signaling pathways [2]. Furthermore, MR-409 (1 and 5 $\mu$ M) reduces lipopolysaccharide (LPS)-induced PGE2 and 8-iso-PGF2 $\alpha$ production in a dose-responsive manner, whereas it decreases LPS-induced lactate dehydrogenase (LDH) activity and nitrite levels independently of dose variation [3]. Similarly, gene expression of COX-2, NF- $\kappa$ B, and iNOS in colon specimens induced by LPS is mitigated by MR-409 at concentrations of 1 and 5 $\mu$ M, again without showing dose-dependency [3]. Additionally, MR-409 stimulates endogenous neurogenesis and counteracts tMCAO-induced neuroplasticity deficits, along with promoting proliferation and reducing apoptosis in neural stem cells subjected to oxygen and glucose deprivation-reperfusion [4].
In vivo	MR 409 (MR-409) suppresses lung cancer growth in vivo when xenografted into nude mice [3]. Additionally, when administered subcutaneously at a dose of 5 $\mu$ g daily for four weeks, MR 409 diminishes the nociceptive response in mice [3].

### Preparing Stock Solutions

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	<b>1mg</b>	<b>5mg</b>	<b>10mg</b>
1 mM	0.2945 mL	1.4724 mL	2.9447 mL
5 mM	0.0589 mL	0.2945 mL	0.5889 mL
10 mM	0.0294 mL	0.1472 mL	0.2945 mL
50 mM	0.0059 mL	0.0294 mL	0.0589 mL

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Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

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