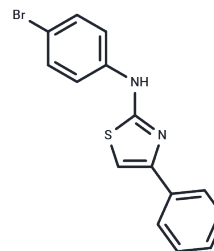


RCGD423

Chemical Properties

CAS No. : 108237-91-8
 Formula: C₁₅H₁₁BrN₂S
 Molecular Weight: 331.23
 Storage: Store under nitrogen
 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	RCGD423, a small molecule gp130 modulator, prevents articular cartilage degeneration and promotes repair.
Targets(IC50)	Interleukin
In vitro	The ability of RCGD 423 to inhibit hypertrophy in human cells was confirmed by assessing RUNX2 and COL 10 levels in healthy and osteoarthritic articular chondrocytes following incubation with the compound. RCGD 423 elicited a unique signaling profile, driving strong increases in pSTAT3 and MYC levels without activating AKT or NF-κB, resulting in a signaling milieu downstream of gp130 similar to actively proliferating and anabolic fetal chondrocytes.
In vivo	Operated animals would receive an intra-articular injection of 4 μg RCGD 423 loaded onto microspheres at the time of surgery and another 3weeks later. In RCGD 423-treated animals, there was little to no cartilage degradation, structural damage or generation of osteophytes. Control animals showed increased levels of cartilage-degrading proteins and markers of hypertrophy, while these were mostly absent in RCGD 423-treated rats.

Solubility Information

Solubility	H ₂ O: Insoluble, DMSO: 255 mg/mL (769.86 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 4 mg/mL (12.08 mM),Sonication is recommended. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.0191 mL	15.0953 mL	30.1905 mL
5 mM	0.6038 mL	3.0191 mL	6.0381 mL
10 mM	0.3019 mL	1.5095 mL	3.0191 mL
50 mM	0.0604 mL	0.3019 mL	0.6038 mL

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.

Reference

Shkhyan R, et al. Drug-induced modulation of gp130 signalling prevents articular cartilage degeneration and promotes repair. *Ann Rheum Dis.* 2018 May;77(5):760-769.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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