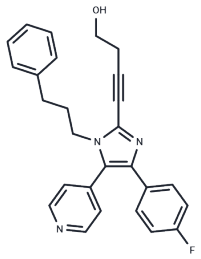
# Data Sheet (Cat.No.T16812)

TargetMol

RWJ-67657

## Chemical Properties



CAS No. : 215303-72-3

Formula: C27H24FN3O

Molecular Weight: 425.5

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 | RWJ-67657 (JNJ 3026582) is an orally active, selective p38α and p38β MAPK inhibitor (IC50s: 1 and 11 μM, respectively), with no activity at p38γ and p38δ, and demonstrates cardioprotective effects. |
| Targets(IC50) | p38 MAPK |
| In vitro | RWJ-67657 suppresses the release of TNF-α by lipopolysaccharide (LPS)-treated human peripheral blood mononuclear cells (IC50: 3 nM) and the release of TNF-α from peripheral blood mononuclear cells treated with the superantigen staphylococcal enterotoxin B (IC50: 13 nM). RWJ67657 (10 μM; 24 hours) reduces colony formation in MCF-7 cells [2][3]. |
| In vivo | RWJ-67657 inhibits TNF-alpha production in lipopolysaccharide-injected mice (87% inhibition at 50 mg/kg) and in rats (91% inhibition at 25 mg/kg) after oral administration. RWJ-67657 (50 mg/kg; p.o.; once daily for 7 consecutive days) demonstrates effective anti-inflammatory activity. EPC transplantation combined with RWJ-67657 administration synergistically promotes angiogenesis and neurogenesis following diabetic stroke by enhancing endothelial progenitor cell function and reducing inflammation [2][4]. |

## Solubility Information

| | |
|---|---|
| Solubility | DMSO: 125 mg/mL (293.77 mM),Sonication and heating to 60°C are recommended.<br>(< 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 (9.4 mM),Sonication is recommended.<br>*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.* |

Preparing Stock Solutions

| | 1mg | 5mg | 10mg |
|---|---|---|---|
| 1 mM | 2.3502 mL | 11.7509 mL | 23.5018 mL |
| 5 mM | 0.470 mL | 2.3502 mL | 4.7004 mL |
| 10 mM | 0.235 mL | 1.1751 mL | 2.3502 mL |
| 50 mM | 0.047 mL | 0.235 mL | 0.470 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

Shahin R, et al. Research advances in kinase enzymes and inhibitors for cardiovascular disease treatment. Future Sci OA. 2017 Aug 8;3(4):FSO204.

Wadsworth SA, et al. RWJ 67657, a potent, orally active inhibitor of p38 mitogen-activated protein kinase. J Pharmacol Exp Ther. 1999 Nov;291(2):680-7.

Frigo DE, et al. p38 mitogen-activated protein kinase stimulates estrogen-mediated transcription and proliferation through the phosphorylation and potentiation of the p160 coactivator glucocorticoid receptor-interacting protein 1. Mol Endocrinol. 2006 May;20(5):971-83.

Bai YY, et al. Synergistic Effects of Transplanted Endothelial Progenitor Cells and RWJ 67657 in Diabetic Ischemic Stroke Models. Stroke. 2015 Jul;46(7):1938-46.



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