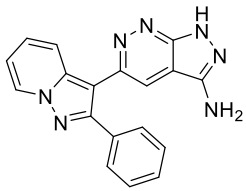


Product data sheet



MedKoo Cat#: 406556 Name: FR180204 CAS#: 865362-74-9 Chemical Formula: C ₁₈ H ₁₃ N ₇ Exact Mass: 327.12324 Molecular Weight: 327.34	
Product supplied as: Powder	
Purity (by HPLC): ≥ 98%	
Shipping conditions: Ambient temperature	
Storage conditions: Powder: -20°C 3 years; 4°C 2 years. In solvent: -80°C 3 months; -20°C 2 weeks.	

1. Product description:

FR180204 is a novel and selective inhibitor of extracellular signal-regulated kinase (ERK), which may be a potential new therapy for rheumatoid arthritis. FR180204 showed activity to inhibit ERKs (IC₅₀ values are 0.14 and 0.31 μM for ERK2 and ERK1 respectively).

2. CoA, QC data, SDS, and handling instruction

SDS and handling instruction, CoA with copies of QC data (NMR, HPLC and MS analytical spectra) can be downloaded from the product web page under “QC And Documents” section. Note: copies of analytical spectra may not be available if the product is being supplied by MedKoo partners. Whether the product was made by MedKoo or provided by its partners, the quality is 100% guaranteed.

3. Solubility data

Solvent	Max Conc. mg/mL	Max Conc. mM
DMSO	43.18	131.91
DMF	30.0	91.65
DMF:PBS (pH 7.2) (1:1)	0.5	1.53
Ethanol	2.0	6.11

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	3.05 mL	15.27 mL	30.55 mL
5 mM	0.61 mL	3.05 mL	6.11 mL
10 mM	0.31 mL	1.53 mL	3.05 mL
50 mM	0.06 mL	0.31 mL	0.61 mL

5. Molarity Calculator, Reconstitution Calculator, Dilution Calculator

Please refer the product web page under section of “Calculator”

6. Recommended literature which reported protocols for in vitro and in vivo study

In vitro study

1. Saglam AS, Alp E, Elmazoglu Z, Menevse ES. Effect of API-1 and FR180204 on cell proliferation and apoptosis in human DLD-1 and LoVo colorectal cancer cells. *Oncol Lett.* 2016 Oct;12(4):2463-2474. doi: 10.3892/ol.2016.4995. Epub 2016 Aug 10. PMID: 27698814; PMCID: PMC5038487.

In vivo study

1. Ohori M, Takeuchi M, Maruki R, Nakajima H, Miyake H. FR180204, a novel and selective inhibitor of extracellular signal-regulated kinase, ameliorates collagen-induced arthritis in mice. *Naunyn Schmiedebergs Arch Pharmacol.* 2007 Jan;374(4):311-6. doi: 10.1007/s00210-006-0117-7. Epub 2006 Nov 23. PMID: 17123065.

7. Bioactivity

Biological target:

FR 180204 is an ATP-competitive and selective ERK inhibitor.

Product data sheet



In vitro activity

As shown in Fig. 3A, treatment with 2 μ M API-1 caused an increase in cytotoxicity at 24 h in DLD-1 cells ($P=0.027$), whereas treatment with 10 μ M FR (FR180204) alone for 48 h increased cytotoxic effects compared with control LoVo cells.

Reference: Oncol Lett. 2016 Oct; 12(4): 2463–2474. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5038487/>

In vivo activity

Preventive administration of FR180204 (100 mg/kg, i.p., b.i.d.) significantly ameliorated the clinical arthritis and body weight loss occurring in the CIA mice. Further, FR180204-treated mice showed a significant decrease in plasma anti-CII antibody levels (62%).

Reference: Naunyn Schmiedebergs Arch Pharmacol. 2007 Jan;374(4):311-6. <https://pubmed.ncbi.nlm.nih.gov/17123065/>

Note: The information listed here was extracted from literature. MedKoo has not independently retested and confirmed the accuracy of these methods. Customer should use it just for a reference only.