

Product Datasheet

M2698

Catalog No. **BP-02489** · CAS **1379545-95-5** · Form **free base** · Physical state **solid** · Color **White to off-white** · Version **1.0** · Revision **2026-09-10**

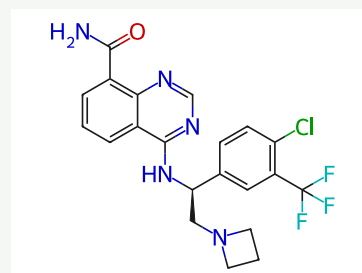
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Target Ribosomal S6 Kinase (RSK); Akt	Research area Cancer
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Molecular formula **C₂₁H₁₉ClF₃N₅O**

Molecular weight **449.8570**

STRUCTURE



DESCRIPTION

M2698 (MSC2363318A) is an orally active, ATP competitive, selective p70S6K and Akt dual-inhibitor with IC₅₀s of 1 nM for p70S6K, Akt1 and Akt3. M2698 can cross the blood-brain barrier and has anti-cancer activity .

BIOLOGICAL ACTIVITY

In Vitro

M2698 (0.3 nM to 50 M; 72 hours) inhibits proliferation in a dose-dependent manner in breast tumors cell lines with IC₅₀s of 0.02-8.5 μM.

? M2698 (0.3, 1 μM; 24 hours) inhibits p70S6K activity and induces feedback loop phosphorylation on Akt and suppresses Akt activity in breast cancer cell lines.

? M2698 inhibits indirectly pGSK3β (IC₅₀=17 nM) and pS6 (IC₅₀=15 nM).

In Vivo

M2698 (10-30 mg/kg/day; PO; 28 days) results in dose-dependent inhibition of tumor growth and results in tumor regression with the highest dose of 30 mg/kg.

? M2698 (20 mg/kg/day; PO; 4 days) has a tumor:plasma exposure ratio of 12:1 over 24 hours and leads to increased levels of pAkt in tumor tissue.

? The mean total concentration of M2698 after 16-hour infusion in rats is 1750 ng/g and 175 ng/mL in brain and plasma, respectively.

? M2698 (po; 1, 5, 10, or 20 mg/kg/day; for 7 days) inhibits the phosphorylation of S6 in a dose-proportional manner over time after a single administration or daily treatments over 7 days.

SOLUBILITY

Soluble in DMSO

REFERENCES

[1].Machl A, et al. M2698 is a potent dual-inhibitor of p70S6K and Akt that affects tumor growth in mouse models of cancer and crosses the blood-brain barrier. Am J Cancer Res. 2016 Mar 15;6(4):806-18.

Tel: +86 20 31130026 · Fax: +86 20 36822386 · tech@biochemprobe.com · www.biochemprobe.com

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Lot CoA and SDS are separate documents.