

MKT-077

Catalog No: tcsc0003758



Available Sizes

Size: 1mg

Size: 5mg

Size: 10mg



Specifications

CAS No:

147366-41-4

Formula:

$C_{21}H_{22}ClN_3OS_2$

Pathway:

Metabolic Enzyme/Protease;Cell Cycle/DNA Damage

Target:

HSP;HSP

Purity / Grade:

>98%

Solubility:

10 mM in DMSO

Alternative Names:

FJ-776

Observed Molecular Weight:

432

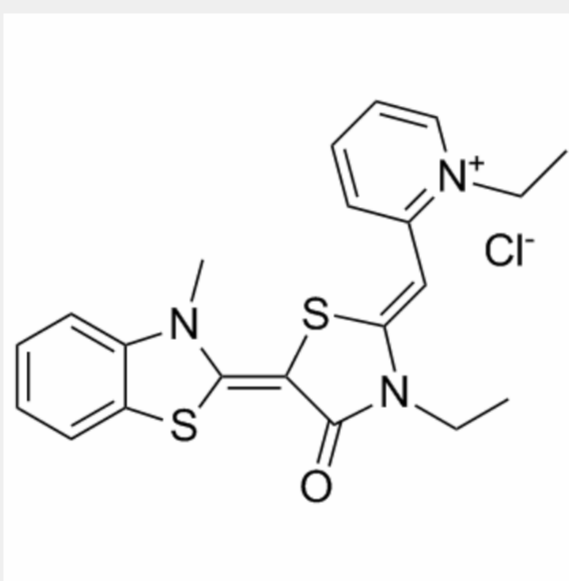
Product Description

MKT-077 is a rhodacyanine dye and also a heat shock protein 70 (**Hsp70**) inhibitor which exhibits significant antitumor activity.

IC50 & Target: Hsp70^[1]

In Vitro: MKT-077 is a rhodacyanine dye and also a heat shock protein 70 (Hsp70) inhibitor which exhibits significant antitumor activity. MKT-077 treatment (0.1 to 10 μM dose ranges) for 48 hours can effectively decrease TT cell viability. MKT-077 treatment results in accumulation of cells in the G0/G1 phase in a dose-dependent manner, and also increases sub-G0/G1 phase population in TT cell culture in a dose-dependent manner. MKT-077 also downregulates cellular levels of the proliferation marker, Ki67, and the S-phase transcription factor, E2F-1, in TT and MZ-CRC-1 cells. Moreover, flow cytometry using different doses of MKT-077 reveals that TT cells can uptake and retain MKT-077 at significantly higher levels than MZ-CRC-1 cells^[1]. MKT-077 has EC_{50} values of 1.4 ± 0.2 and 2.2 ± 0.2 μM against MDA-MB-231 and MCF7 breast cancer cells, respectively^[2].

In Vivo: Systemic administration of MKT-077 significantly delays the growth of TT xenografts in mice throughout the treatment. At the end of MKT-077 treatment, it is found that tumor weights are about two-times less in MKT-077-treated group than in control group. MKT-077 treatment also results in weight loss and general toxicity in animals^[1]. Results show that the succinate-induced, ADP-stimulated respiratory rate in mitochondria isolated from the liver of rats treated with a bolus i.v. injection of 15 mg MKT-077 1kg body weight each day for 5 days is significantly lower than that of untreated controls^[3].



All products are for RESEARCH USE ONLY. Not for diagnostic & therapeutic purposes!