TOCRIS
a bio-techne brand

Print Date: Jan 14th 2016

Certificate of Analysis

www.tocris.com

Product Name: **MKT 077** **Catalog No.: 4621** **Batch No.: 1**

CAS Number: 147366-41-4

IUPAC Name: 1-Ethyl-2-[[3-ethyl-5-(3-methyl-2(3*H*)-benzothiazolylidene)-4-oxo-2-thiazolidinylidene]methyl]-pyridinium chloride

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{21}H_{22}ClN_3OS_2 \cdot \frac{1}{2}H_2O$

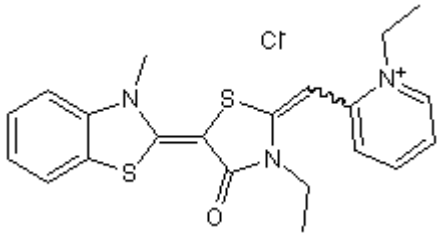
Batch Molecular Weight: 441.01

Physical Appearance: Orange/red solid

Solubility: water to 50 mM
DMSO to 50 mM

Storage: Store at +4°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 98.6% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	57.19	5.26	9.53
Found	56.93	5.31	9.44

bio-techne.com
info@bio-techne.com
techsupport@bio-techne.com

North America
Tel: (800) 343 7475

China
info.cn@bio-techne.com
Tel: +86 (21) 52380373

Europe Middle East Africa
Tel: +44 (0)1235 529449

Rest of World
www.tocris.com/distributors
Tel:+1 612 379 2956

Product Name: **MKT 077** **Catalog No.: 4621** **Batch No.: 1**

CAS Number: 147366-41-4

IUPAC Name: 1-Ethyl-2-[[3-ethyl-5-(3-methyl-2(3*H*)-benzothiazolylidene)-4-oxo-2-thiazolidinylidene]methyl]-pyridinium chloride

Description:

Occupies mortalin-2 (mot-2), a member of the Hsp70 family, at its p53 binding site and enables p53 translocation to the nucleus. Selectively cytotoxic; causes growth arrest of cancer cells in culture. Also inhibits telomerase activity and cross-links F-actin.

Physical and Chemical Properties:

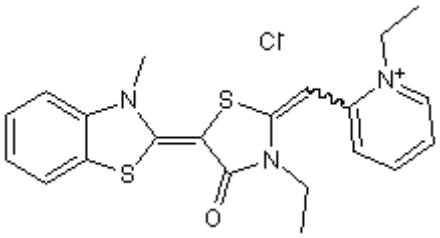
Batch Molecular Formula: $C_{21}H_{22}ClN_3OS_2.½H_2O$

Batch Molecular Weight: 441.01

Physical Appearance: Orange/red solid

Minimum Purity: >98%

Batch Molecular Structure:



Storage: Store at +4°C

Solubility & Usage Info:

water to 50 mM
DMSO to 50 mM

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Tikoo *et al* (1999) Treatment of Ras-induced cancers by the F-actin cappers tensin and chaetoglobosin K, in combination with the caspase-1 inhibitor N1445. Cancer J.Sci.Am. ***5*** 293. PMID: 10526670.

Wadhwa *et al* (2000) Selective toxicity of MKT-077 to cancer cells is mediated by its binding to the hsp70 family protein mot-2 and reactivation of p53 function. Cancer Res. ***60*** 6818. PMID: 11156371 .

Wadhwa *et al* (2002) Rhodacyanine dye MKT-077 inhibits *in vitro* telomerase activity but has no detectable effects on telomerase activity *in vivo*. Cancer Res. ***62*** 4434. PMID: 12154051.

Patury *et al* (2009) Pharmacological targeting of the Hsp70 chaperone. Curr.Top.Med.Chem. ***9*** 1337. PMID: 19860737.