# **Certificate of Analysis**

## www.tocris.com

Print Date: Jul 17th 2018

### Product Name: YM 155

Batch No.: 1

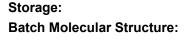
CAS Number: 781661-94-7 Catalog No.: 6491

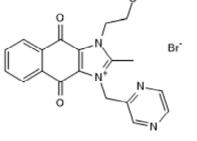
**IUPAC Name:** 4,9-Dihydro-1-(2-methoxyethyl)-2-methyl-4,9-dioxo-3-(2-pyrazinylmethyl)-1H-naphth[2,3-d]imidazolium bromide

**Batch Molecular Formula: Batch Molecular Weight: Physical Appearance:** Solubility:

1. PHYSICAL AND CHEMICAL PROPERTIES

C<sub>20</sub>H<sub>19</sub>BrN<sub>4</sub>O<sub>3</sub> 443.29 Yellow solid water to 100 mM DMSO to 20 mM Store at -20°C





### 2. ANALYTICAL DATA

HPLC: <sup>1</sup>H NMR: Mass Spectrum: Microanalysis:

Shows 99.0% purity Consistent with structure Consistent with structure

	Carbon	Hydrogen	Nitrogen
Theoretical	54.19	4.32	12.64
Found	53.82	4.3	12.61

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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# TOCRIS a biotechne brand

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4,9-Dihydro-1-(2-methoxyethyl)-2-methyl-4,9-dioxo-3-(2-pyrazinylmethyl)-1H-naphth[2,3-d]imidazolium bromide

#### **Description:**

**IUPAC Name:** 

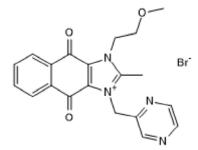
Survivin suppressor. Down-regulates survivin expression and sensitizes human NSCLC cell lines to radiation. Enhances radiation-induced tumor regression in nude mice bearing NSCLC xenografts. Also induces apoptosis in TRAIL-resistant glioma cells in vitro.

#### Physical and Chemical Properties:

Batch Molecular Formula: C<sub>20</sub>H<sub>19</sub>BrN<sub>4</sub>O<sub>3</sub> Batch Molecular Weight: 443.29 Physical Appearance: Yellow solid

#### Minimum Purity: >98%

#### **Batch Molecular Structure:**



#### **Storage:** Store at -20°C

#### Solubility & Usage Info:

water to 100 mM DMSO to 20 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).

Catalog No.: 6491

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:**

**Premkumar** *et al* (2013) Survivin inhibitor YM-155 sensitizes tumor necrosis factor- related apoptosis-inducing ligand-resistant glioma cells to apoptosis through Mcl-1 downregulation and by engaging the mitochondrial death pathway. J.Pharmacol.Exp.Ther. **346** 201. PMID: 23740602.

lwasa et al (2008) Radiosensitizing effect of YM155, a novel small-molecule survivin suppressant, in non-small cell lung cancer cell lines. Clin.Cancer Res. 14 6496. PMID: 18927289.

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