

**Product Name:** DMXAA

**Catalog No.:** 5601

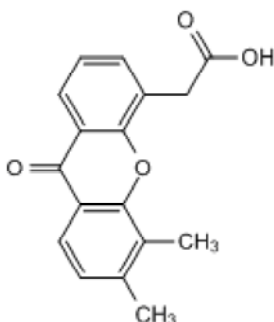
**Batch No.:** 2

CAS Number: 117570-53-3

IUPAC Name: 5,6-Dimethyl-9-oxo-9H-xanthene-4-acetic acid

**1. PHYSICAL AND CHEMICAL PROPERTIES**

**Batch Molecular Formula:** C<sub>17</sub>H<sub>14</sub>O<sub>4</sub>  
**Batch Molecular Weight:** 282.29  
**Physical Appearance:** Off-white solid  
**Solubility:** DMSO to 20 mM  
**Storage:** Store at +4°C  
**Batch Molecular Structure:**



**2. ANALYTICAL DATA**

**HPLC:** Shows 99.8% purity  
**<sup>1</sup>H NMR:** Consistent with structure  
**Mass Spectrum:** Consistent with structure

**Microanalysis:**

	Carbon	Hydrogen	Nitrogen
Theoretical	72.33	5	
Found	72.28	4.99	

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

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**Description:**

DMXAA is a mSTING agonist; selective for mouse STING over human STING. Induces IFN- $\beta$  and cytokine production from bone marrow-derived dendritic cells. Causes tumor regression following intratumoral administration in mouse tumor models. Induces an adaptive immune response to reduce systemic tumor growth and provides immunological memory against autologous tumor re-challenge. Also antiviral.

**Physical and Chemical Properties:**

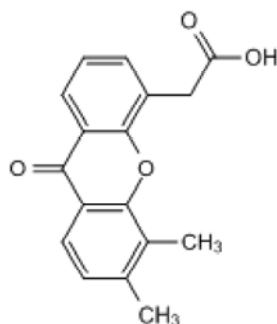
Batch Molecular Formula: C<sub>17</sub>H<sub>14</sub>O<sub>4</sub>

Batch Molecular Weight: 282.29

Physical Appearance: Off-white solid

**Minimum Purity:**  $\geq 99\%$

**Batch Molecular Structure:**



**Storage:** Store at +4°C

**Solubility & Usage Info:**

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).

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:**

**Corrales et al** (2015) Direct activation of STING in the tumor microenvironment leads to potent and systemic tumor regression and immunity. *Cell Rep.* **11** 1018. PMID: 25959818.

**Shirey et al** (2011) The anti-tumor agent, 5,6-dimethylxanthene-4-acetic acid (DMXAA), induces IFN- $\beta$ -mediated antiviral activity *in vitro* and *in vivo*. *J.Leukoc.Biol.* **89** 351. PMID: 21084628.

**Phillips** (1999) Inhibition of DT-diaphorase (NAD(P)H:quinone oxidoreductase, EC 1.6.99.2) by 5,6-dimethylxanthene-4-acetic acid (DMXAA) and flavone-8-acetic acid (FAA): implications for bioreductive drug development. *Biochem.Pharmacol.* **58** 303. PMID: 10423172.

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