DMXAA
Murine STING ligand
Catalog code: tlrl-dmx
http://www.invivogen.com/dmxaa

For research use only. Not for use in humans.
Version 18E03-MM

PRODUCT INFORMATION

Content:
• 5 mg of DMXAA

Storage and stability:
- DMXAA is shipped at room temperature and should be stored at -20°C. Product is stable for 1 year when properly stored.
- Upon resuspension, prepare aliquots of DMXAA and store at -20°C. Resuspended product is stable for 12 months when properly stored. Avoid repeated freeze-thaw cycles.

Quality control:
- Purity: ≥ 97% (UHPLC)
- Biological activity has been assessed by measuring induction of the interferon pathway in cellular assays.
- The absence of bacterial contamination (e.g. lipoproteins and endotoxins) has been verified using HEK-Blue™ TLR2 and HEK-Blue™ TLR4 cells.

DESCRIPTION

DMXAA (also known as Vadimezan or ASA404) was initially identified as a potent tumor vascular disrupting agent in mice. The antitumor activity of DMXAA has been linked to its ability to induce a variety of cytokines and chemokines, including TNF, IL-2, IP-10, IP-10, IL-6 and RANTES.


287(47):39776-88.


DMXAA was initially identified as a potent tumor vascular disrupting agent in mice. The antitumor activity of DMXAA has been linked to its ability to induce a variety of cytokines and chemokines, including TNF, IL-2, IP-10, IP-10, IL-6 and RANTES. DMXAA is also a potent inducer of IFN-β. Despite significant preclinical promise, DMXAA failed human clinical trials. Recent studies have demonstrated that DMXAA targets the STING pathway, and this in a mouse-specific manner; DMXAA has no effect on human STING.

A unique point mutation (S162A) located within the cyclic-dinucleotide-binding site of human STING has been identified that renders it sensitive to DMXAA.


CHMICAL PROPERTIES

Synonym: 5,6-dimethylxanthenone-4-acetic acid
CAS Number: 117570-53-3
Formula: C17H14O4
 Molecular weight: 282.29
Solubility: 10 mg/ml in DMSO
Source: Synthetic
Structure:

METHODS

Preparation of stock solution (10 mg/ml):
- Stimulation of mSTING can be achieved with 10-100 μg/ml DMXAA.
- Reconstitute by adding 500 μl DMSO to the content of the tube.
- Mix by vortexing for several minutes until complete solubilization.
- Use cell culture medium (e.g. DMEM) to prepare serial dilutions.

Induction of type I IFNs in RAW-Blue ISG cells
Induction of type I IFNs with DMXAA can be studied in a variety of murine cells. The murine RAW 264.7 macrophage cell line has been shown to express STING and respond to DMXAA. A protocol for the induction of type I IFNs using RAW-Lucia™ ISG cells, a cell line that expresses the secreted Lucia luciferase reporter gene under the control of an IRF-inducible promoter, is given below:

- Resuspend DMXAA, as described above.
- Stimulate cells with 10-100 μg/ml DMXAA for 16-48 hours.
- Monitor induction of type I IFNs by measuring the levels of IRF-induced Lucia luciferase in the supernatant using QUANTI-Luc™, a Lucia luciferase detection reagent.

RELATED PRODUCTS

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<td>293d-a162</td>
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<tr>
<td>RAW-Lucia™ ISG Cells</td>
<td>rawl-isl</td>
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<tr>
<td>THP1-Dual™ KI-hSTING-A162 Cells</td>
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<td>QUANTI-Luc™</td>
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