

Product Name: Bay 11-7821

Catalog No.: 1744

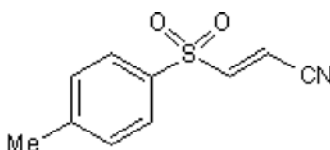
Batch No.: 1

CAS Number: 19542-67-7

IUPAC Name: (2E)-3-[(4-Methylphenyl)sulfonyl]-2-propenenitrile

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₀H₉NO₂S
Batch Molecular Weight: 207.25
Physical Appearance: White solid
Solubility: ethanol to 25 mM
 DMSO to 100 mM
Storage: Store at +4°C
Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.3 (Dichloromethane:Petroleum ether [1:1])
Melting Point: Between 133 - 136°C
HPLC: Shows >99.8% purity
¹H NMR: Consistent with structure
¹³C NMR: Consistent with structure
Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	57.96	4.38	6.76
Found	57.89	4.33	6.91

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

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Description:

E2 ubiquitin (Ub) conjugating enzyme inhibitor. Inhibits the conjugation of Ub to a range of E2 enzymes. Inhibits E2 enzyme mediated IκBα phosphorylation and indirectly decreases NF-κB activity. Also reversibly activates MAPK signaling. Induces apoptosis of leukemic T cell and B-cell lymphoma cell lines. Also inhibits activation of NLRP3 inflammasome. Binds and inhibits gasdermin D (GSDMD) pore formation. Pyroptosis inhibitor.

Physical and Chemical Properties:

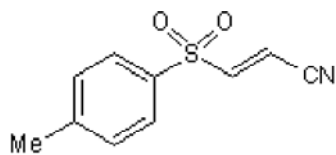
Batch Molecular Formula: C₁₀H₉NO₂S

Batch Molecular Weight: 207.25

Physical Appearance: White solid

Minimum Purity: ≥99%

Batch Molecular Structure:



Storage: Store at +4°C

CAUTION - This product is light sensitive and we recommend that the solid material and any solutions obtained are protected from exposure to light.

Solubility & Usage Info:

ethanol to 25 mM

DMSO to 100 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:

Pandeya et al (2019) Gasdermin D (GSDMD) as a new target for the treatment of infection. *Medchemcomm* **10** 660. PMID: 31191857.

Strickson et al (2013) The anti-inflammatory drug BAY 11-7082 suppresses the MyD88-dependent signalling network by targeting the ubiquitin system. *Biochem.J.* **451** 427. PMID: 23441730.

Juliana et al (2010) Anti-inflammatory compounds parthenolide and Bay 11-7082 are direct inhibitors of the inflammasome. *J.Biol.Chem.* **285** 9792. PMID: 20093358.

Mori et al (2002) Bay 11-7082 inhibits transcription factor NF-κB and induces apoptosis of HTLV-I-infected T-cell lines and primary adult T-cell leukemia cells. *Blood* **100** 1828. PMID: 12176906.

Pierce et al (1997) Novel inhibitors of cytokine-induced IκBα phosphorylation and endothelial cell adhesion molecule expression show anti-inflammatory effects *in vivo*. *J.Biol.Chem.* **272** 21096. PMID: 9261113.

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