

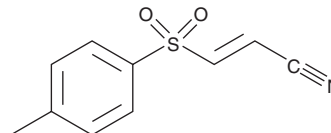
# PRODUCT INFORMATION



## BAY 11-7082

Item No. 10010266

CAS Registry No.: 19542-67-7  
Formal Name: 3-[(4-methylphenyl)sulfonyl]-(2E)-propenenitrile  
MF: C<sub>10</sub>H<sub>9</sub>NO<sub>2</sub>S  
FW: 207.3  
Purity: ≥98%  
Stability: ≥2 years at -20°C  
Supplied as: A crystalline solid  
UV/Vis.: λ<sub>max</sub>: 251 nm



### Laboratory Procedures

For long term storage, we suggest that BAY 11-7082 be stored as supplied at -20°C. It should be stable for at least two years.

BAY 11-7082 is supplied as a crystalline solid. A stock solution may be made by dissolving the BAY 11-7082 in an organic solvent purged with an inert gas. BAY 11-7082 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of BAY 11-7082 in ethanol is approximately 0.2 mg/ml and approximately 25 mg/ml in DMSO and DMF.

BAY 11-7082 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, BAY 11-7082 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. BAY 11-7082 has a solubility of approximately 0.25 mg/ml in a 1:3 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

The transcription factor NF-κB plays a key role in regulating over 150 target genes including the expression of inflammatory cytokines, chemokines, immunoreceptors, and cell adhesion molecules.<sup>1</sup> In the cytoplasm, inactive NF-κB complexes are bound to an inhibitor IκB.<sup>2</sup> However in response to certain stimuli, IκB is phosphorylated, ubiquitinated, and degraded, enabling the translocation of NF-κB to the nucleus.<sup>3</sup> BAY 11-7082 selectively and irreversibly inhibits NF-κB activation by blocking TNF-α-induced phosphorylation of IκB-α without affecting constitutive IκB-α phosphorylation.<sup>4</sup> This compound inhibits the TNF-α-induced surface expression of adhesion molecules ICAM-1, VCAM-1, and E-selectin in human endothelial cells with IC<sub>50</sub> values of 5-10 μM.<sup>4</sup>

### References

1. Pahl, H.L. Activators and target genes of Rel/NF-κB transcription factors. *Oncogene* **18**, 6853-6866 (1999).
2. Gilmore, T.D. The Rel/NF-κB signal transduction pathway: Introduction. *Oncogene* **18**, 6842-6844 (1999).
3. Karin, M. The beginning of the end: IκB kinase (IKK) and NF-κB activation. *J. Biol. Chem.* **274**(39), 27339-27342 (1999).
4. Pierce, J.W., Schoenleber, R., Jesmok, G., et al. Novel inhibitors of cytokine-induced IκBα phosphorylation and endothelial cell adhesion molecule expression show anti-inflammatory effects *in vivo*. *J. Biol. Chem.* **272**(34), 21096-21103 (1997).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

#### WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 11/04/2015

#### CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897  
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM  
WWW.CAYMANCHEM.COM