

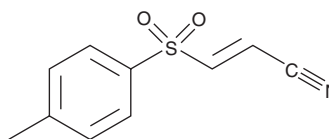
PRODUCT INFORMATION



BAY 11-7082

Item No. 10010266

CAS Registry No.: 19542-67-7
Formal Name: 3-[[4-methylphenyl]sulfonyl]-(2E)-propenenitrile
MF: C₁₀H₉NO₂S
FW: 207.3
Purity: ≥98%
UV/Vis.: λ_{max}: 251 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

BAY 11-7082 is supplied as a crystalline solid. A stock solution may be made by dissolving the BAY 11-7082 in the solvent of choice, which should be 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.¹ In the cytoplasm, inactive NF-κB complexes are bound to an inhibitor IκB.² However in response to certain stimuli, IκB is phosphorylated, ubiquitinated, and degraded, enabling the translocation of NF-κB to the nucleus.³ 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.⁴ This compound inhibits the TNF-α-induced surface expression of adhesion molecules ICAM-1, VCAM-1, and E-selectin in human endothelial cells with IC₅₀ values of 5-10 μM.⁴

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.

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