



**Orders:** 877-616-CELL (2355)  
orders@cellsignal.com

**Support:** 877-678-TECH (8324)

**Web:** info@cellsignal.com  
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

Store at RT  
#78679

**BAY 11-7082**

5 mg

**For Research Use Only. Not for Use in Diagnostic Procedures.**

## Background

BAY 11-7082 is a selective and irreversible inhibitor of cytokine-induced I $\kappa$ B $\alpha$  phosphorylation. Treatment with TNF- $\alpha$  leads to the activation of I $\kappa$ B $\alpha$  resulting in nuclear translocation of NF- $\kappa$ B where it regulates gene expression. Inhibition of I $\kappa$ B $\alpha$  phosphorylation leads to the inactivation of NF- $\kappa$ B (1). The effect that BAY 11-7082 has on proinflammatory cytokine production as it relates to the NF- $\kappa$ B/I $\kappa$ B kinase pathways makes it useful when studying inflammation (2). This compound inhibits IFN- $\alpha$  production and nuclear translocation of interferon regulatory factor 7 (IRF7) in human plasmacytoid dendritic cells, both important factors when studying immunotherapeutic strategies as they relate to autoimmune disorders (3). BAY 11-7082 inhibits TNF- $\alpha$ -induced surface expression of ICAM-1, VCAM-1, and E-Selectin in human endothelial cells with an IC<sub>50</sub> value between 5–10  $\mu$ M (1).

## Molecular Formula

C<sub>10</sub>H<sub>9</sub>NO<sub>2</sub>S

## Molecular Weight

207.3 g/mol

## Purity

>98%

## CAS

19542-67-7

## Solubility

Soluble in DMSO at 25 mg/ml or ethanol at 15 mg/ml.

## Storage

Store lyophilized at room temperature, desiccated. In lyophilized form, the chemical is stable for 24 months. Once in solution, store at -20°C and use within 3 months to prevent loss of potency. *Aliquot to avoid multiple freeze/thaw cycles.*

## Directions for Use

BAY 11-7082 is supplied as a lyophilized powder. For a 20 mM stock, reconstitute 5 mg of powder in 1.2 ml of DMSO. Working concentrations and length of treatment can vary depending on the desired effect.

## Background References

1. Pierce, J.W. et al. (1997) *J Biol Chem* 272, 21096-103.
2. Lappas, M. et al. (2005) *Endocrinology* 146, 1491-7.
3. Miyamoto, R. et al. (2010) *Arthritis Res Ther* 12, R87.

## Trademarks and Patents

Cell Signaling Technology is a trademark of Cell Signaling Technology, Inc.

XP is a registered trademark of Cell Signaling Technology, Inc.

All other trademarks are the property of their respective owners. Visit [cellsignal.com/trademarks](http://cellsignal.com/trademarks) for more information.

## Limited Uses

Except as otherwise expressly agreed in a writing signed by a legally authorized representative of CST, the following terms apply to Products provided by CST, its affiliates or its distributors. Any Customer's terms and conditions that are in addition to, or different from, those contained herein, unless separately accepted in writing by a legally authorized representative of CST, are rejected and are of no force or effect.

Products are labeled with For Research Use Only or a similar labeling statement and have not been approved, cleared, or licensed by the FDA or other regulatory foreign or domestic entity, for any purpose. Customer shall not use any Product for any diagnostic or therapeutic purpose, or otherwise in any manner that conflicts with its labeling statement. Products sold or licensed by CST are provided for Customer as the end-user and solely for research and development uses. Any use of Product for diagnostic, prophylactic or therapeutic purposes, or any purchase of Product for resale (alone or as a component) or other commercial purpose, requires a separate license from CST. Customer shall (a) not sell, license, loan, donate or otherwise transfer or make available any Product to any third party, whether alone or in combination with other materials, or use the Products to manufacture any commercial products, (b) not copy, modify, reverse engineer, decompile, disassemble or otherwise attempt to discover the underlying structure or technology of the Products, or use the Products for the purpose of developing any products or services that would compete with CST products or services, (c)

not alter or remove from the Products any trademarks, trade names, logos, patent or copyright notices or markings, (d) use the Products solely in accordance with CST Product Terms of Sale and any applicable documentation, and (e) comply with any license, terms of service or similar agreement with respect to any third party products or services used by Customer in connection with the Products.