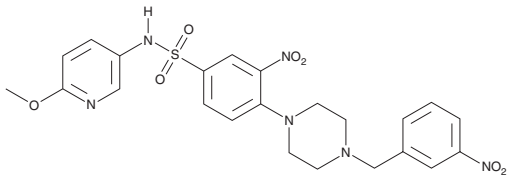
# PRODUCT INFORMATION

## MyD88-IN-1

*Item No. 46523*

**CAS Registry No.:** 2911609-80-6
**Formal Name:** N-(6-methoxy-3-pyridinyl)-3-nitro-4-[4-[(3-nitrophenyl)methyl]-1-piperazinyl]-benzenesulfonamide
**Synonyms:** Compound c17, MyD88 Inhibitor 1
**MF:** $C_{23}H_{24}N_6O_7S$
**FW:** 528.5
**Purity:** ≥98%
**Supplied as:** A 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

MyD88-IN-1 is supplied as a solid. A stock solution may be made by dissolving the MyD88-IN-1 in the solvent of choice, which should be purged with an inert gas. MyD88-IN-1 is sparingly soluble (1-10 mg/ml) in DMSO.

### Description

MyD88-IN-1 is an inhibitor of MyD88.[1] It binds to MyD88 in a cell-free assay ($K_d$ = 53 µM) and prevents the LPS-induced MyD88 and toll-like receptor 4 (TLR4) interaction in J774A.1 macrophages at 80 µM. It inhibits LPS-induced IL-6 and TNF-α production ($IC_{50}$s = 2.17 and 8.17 µM, respectively) and LPS-induced NF-κB (p65) nuclear translocation in J774A.1 macrophages. MyD88-IN-1 (20 mg/kg, p.o.) decreases pulmonary edema and histopathological severity in a mouse model of acute lung injury. It protects against cardiac dysfunction, hypertrophy, and fibrosis but does not affect body weight or blood glucose levels in a mouse model of diabetic cardiomyopathy induced by streptozotocin (Item No. 13104).[2]

### References


1. Chen, P., Zhou, Y., Li, X., *et al.* Design, synthesis, and bioevaluation of novel MyD88 inhibitor c17 against acute lung injury derived from the virtual screen. *J. Med. Chem.* **66(10)**, 6938-6958 (2023).
2. Zhang, Q., Zhu, W., Lou, S., *et al.* Compound c17 alleviates inflammatory cardiomyopathy in streptozotocin-induced diabetic mice by targeting MyD88. *Int. Immunopharmacol.* **124(Pt A)**, 110863 (2023).



**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, 10/19/2026



**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