

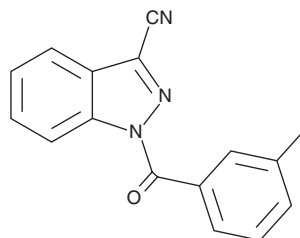
PRODUCT INFORMATION



Neutrophil Elastase Inhibitor

Item No. 14922

CAS Registry No.: 1448314-31-5
Formal Name: 1-(3-methylbenzoyl)-1H-indazole-3-carbonitrile
MF: C₁₆H₁₁N₃O
FW: 261.3
Purity: ≥95%
UV/Vis.: λ_{max}: 242, 307 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

Neutrophil elastase inhibitor is supplied as a crystalline solid. A stock solution may be made by dissolving the neutrophil elastase inhibitor in the solvent of choice, which should be purged with an inert gas. Neutrophil elastase inhibitor is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of neutrophil elastase inhibitor in these solvents is approximately 0.5, 10, and 30 mg/ml, respectively.

Neutrophil elastase inhibitor is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, neutrophil elastase inhibitor should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Neutrophil elastase inhibitor has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Neutrophil elastase is stored within cytoplasmic azurophilic granules in the neutrophil and released upon stimulation by pathogens where it acts either as free protein or is associated with neutrophil extracellular traps (NETs). Together with other proteases released from activated neutrophils, neutrophil elastase plays a critical role in degrading invading pathogens and thus provides the earliest line of defense in the immune system. Neutrophil elastase inhibitor is an N-benzoylindazole derivative that selectively targets the binding domain of neutrophil elastase (IC₅₀ = 7 nM).¹ It has been shown to inhibit additional serine proteases, thrombin and urokinase, only at higher, micromolar concentrations (IC₅₀s = 1.9 and 6.6 μM, respectively).¹

Reference

1. Crocetti, L., Schepetkin, I.A., Cilibrizzi, A., *et al.* Optimization of N-benzoylindazole derivatives as inhibitors of human neutrophil elastase. *J. Med. Chem.* **56**(15), 6259-6272 (2013).

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, 02/01/2024

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