PRODUCT INFORMATION



Nodinitib-1

Item No. 11040

CAS Registry No.: Formal Name:	799264-47-4 1-[(4-methylphenyl)sulfonyl]- 1H-benzimidazol-2-amine
Synonyms:	CID-1088438, ML-130
MF:	$C_{14}H_{13}N_{3}O_{2}S$
FW:	287.3
Purity:	≥95% S
UV/Vis.:	λ_{max} : 243 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

Nodinitib-1 is supplied as a crystalline solid. A stock solution may be made by dissolving the nodinitib-1 in the solvent of choice, which should be purged with an inert gas. Nodinitib-1 is soluble in organic solvents such as DMSO and dimethyl formamide (DMF). The solubility of nodinitib-1 in these solvents is approximately 13 and 20 mg/ml, respectively.

Nodinitib-1 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, nodinitib-1 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Nodinitib-1 has a solubility of approximately 0.11 mg/ml in a 1:8 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

NOD1 is a member of the NACHT and leucine-rich repeat domain-containing proteins (NLR) family of innate immunity proteins. It recognizes distinct molecular patterns from bacterial ligands and activates NF-κB, stress kinases, and interferon response factors important for host defense and inflammation. Hereditary polymorphisms in the NOD1 gene are associated with asthma, inflammatory bowel disease, multiple sclerosis, and other disorders. Noditinib-1 selectively inhibits NOD1-dependent activation of NF-κB and MAPK signaling (IC₅₀ = 0.6 μ M) and also inhibits NOD1-induced IL-8 production in MCF-7 cells without affecting viability.¹ In ex vivo dendritic cell culture, 15 µM noditinib-1 reduced cell-surface expression of CD83, CD86, and HLA-DR and inhibited expression of IL-1β, IL-6, and TNF-α. The mechanism of this inhibitor's activity is thought to involve alteration of the subcellular targeting of NOD1.

Reference

1. Correa, R.G., Khan, P.M., Askari, N., et al. Discovery and characterization of 2-aminobenximidazole derivatives as selective NOD1 inhibitors. Chem. Biol. 18(7), 825-832 (2011).

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

SAFFTY 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

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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