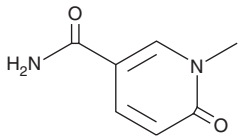
PRODUCT INFORMATION

Nudifloramide

Item No. 20507

CAS Registry No.:	701-44-0
Formal Name:	1,6-dihydro-1-methyl-6-oxo-3-pyridinecarboxamide
Synonyms:	N-methyl-2-Pyridone-5-Carboxamide, Met2PY, 2-Py
MF:	$C_7H_8N_2O_2$
FW:	152.2
Purity:	≥95%
UV/Vis.:	λ_{max}: 257, 301 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

Nudifloramide is supplied as a crystalline solid. A stock solution may be made by dissolving the nudifloramide in the solvent of choice, which should be purged with an inert gas. Nudifloramide is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of nudifloramide in ethanol is approximately 3 mg/ml and approximately 10 mg/ml in DMSO and DMF.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of nudifloramide can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of nudifloramide in PBS (pH 7.2) is approximately 5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Nudifloramide is an active metabolite of the cofactor, biological intermediate, and NAD^+ biosynthetic precursor nicotinamide (Item No. 11127).[1] It is formed from nicotinamide *via* a 1-methylnicotinamide (Item No. 16604) intermediate by aldehyde oxidase (AOX). Nudifloramide is an inhibitor of poly(ADP-ribose) polymerase (PARP; IC_{50} = 8 µM).[2] Plasma levels of nudifloramide are increased in patients with chronic renal failure.[3]

References

1. Giner, M.P., Christen, S., Bartova, S., *et al.* A method to monitor the NAD^+ metabolome - from mechanistic to clinical applications. *Int. J. Mol. Sci.* **22(19),** 10598 (2021).
2. Lenglet, A., Liabeuf, S., Bodeau, S., *et al.* N-methyl-2-pyridone-5-carboxamide (2PY)-Major metabolite of nicotinamide: An update on an old uremic toxin. *Toxins (Basel)* **8(11),** E339 (2016).
3. Rutkowski, B., Rutkowski, P., Słomińska, E., *et al.* Distribution of purine nucleotides in uremic fluids and tissues. *J. Ren. Nutr.* **20(5 Suppl),** S7-10 (2010).

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