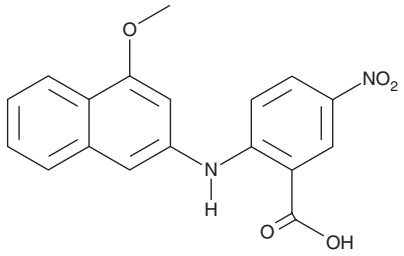
PRODUCT INFORMATION

MONNA

Item No. 21917

CAS Registry No.:	1572936-83-4
Formal Name:	2-[(4-methoxy-2-naphthalenyl) amino]-5-nitro-benzoic acid
MF:	$C_{18}H_{14}N_2O_5$
FW:	338.3
Purity:	≥98%
UV/Vis.:	λ_{max}: 214, 264, 295, 376 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

MONNA is supplied as a crystalline solid. A stock solution may be made by dissolving the MONNA in the solvent of choice, which should be purged with an inert gas. MONNA is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of MONNA in these solvents is approximately 30 mg/ml. MONNA is also slightly soluble in ethanol.

MONNA is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, MONNA should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. MONNA has a solubility of approximately 0.25 mg/ml in a 1:3 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

MONNA is a selective inhibitor of anoctamin-1 (ANO1; IC_{50} = 0.08 µM in *Xenopus* oocytes), a calcium-activated chloride channel (CaCC).[1] It is selective for ANO1 over the chloride channels bestrophin-1, chloride channel protein 2, and cystic fibrosis transmembrane conductance regulator up to 10 µM. MONNA (10 µM) induces full vasorelaxation of preconstricted mouse isolated mesenteric arteries in the presence or absence of chloride.[2] It also hyperpolarizes isolated rat mesenteric arteries under resting conditions.

References

1. Oh, S. J., Hwang, S.J., Jung, J.E., *et al.* MONNA, a potent and selective blocker for transmembrane protein with unknown function 16/anoctamin-1. *Mol. Pharmacol.* **84(5)**, 726-735 (2013).
2. Boedtkjer, D.M.B., Kim, S., Jensen, A.B., *et al.* New selective inhibitors of calcium-activated chloride channels - $T16A_{inh}$-A01, $CaCC_{inh}$-A01 and MONNA - what do they inhibit? *Br. J. Pharmacol.* **172(16)**, 4158-4172 (2015).

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