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Zuschläge

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- Trockeneiszuschlag
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SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

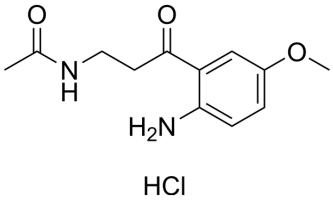
mail@szabo-scandic.com

www.szabo-scandic.com

linkedin.com/company/szaboscandic

N1-Acetyl-5-methoxykynuramine hydrochloride

Cat. No.:	HY-W587743
CAS No.:	1215711-91-3
Molecular Formula:	$C_{12}H_{17}ClN_2O_3$
Molecular Weight:	272.73
Target:	Prostaglandin Receptor; PGE synthase; COX; Reactive Oxygen Species
Pathway:	GPCR/G Protein; Immunology/Inflammation; Metabolic Enzyme/Protease; NF-κB
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	N1-Acetyl-5-methoxykynuramine (AMK) hydrochloride is an active metabolite of the neurohormone melatonin (HY-B0075). N1-Acetyl-5-methoxykynuramine hydrochloride (200 μM) effectively scavenges singlet oxygen (ROS).1 It also inhibits the production of prostaglandin E2 (PGE2) and prostaglandin D2 (PGD2) induced by epinephrine and arachidonic acid in a concentration- and time-dependent manner, and suppresses the increase in COX-2 levels induced by LPS (HY-D1056) in RAW 264.7 macrophages at a concentration of 500 μM. In a mouse model of Parkinson's disease induced by MPTP (HY-15608), N1-Acetyl-5-methoxykynuramine hydrochloride (20 mg/kg) reduces the increase in lipid peroxidation in the cytosol and mitochondria of the substantia nigra and striatum. N1-Acetyl-5-methoxykynuramine hydrochloride can be used in research on metabolic and neurological diseases[1][2][3][4][5][6]
IC_{50} & Target	COX-2

REFERENCES

[1]. Hirata F, et al. In vitro and in vivo formation of two new metabolites of melatonin. J Biol Chem. 1974 Feb 25;249(4):1311-3.

[2]. Schaefer M, et al. The melatonin metabolite N-acetyl-5-methoxykynuramine is a potent singlet oxygen scavenger. J Pineal Res. 2009 Jan;46(1):49-52.

[3]. Kelly RW, et al. N-acetyl-5-methoxy kynurenamine, a brain metabolite of melatonin, is a potent inhibitor of prostaglandin biosynthesis. Biochem Biophys Res Commun. 1984 May 31;121(1):372-9.

[4]. Mayo JC, et al. Anti-inflammatory actions of melatonin and its metabolites, N1-acetyl-N2-formyl-5-methoxykynuramine (AFMK) and N1-acetyl-5-methoxykynuramine (AMK), in macrophages. J Neuroimmunol. 2005 Aug;165(1-2):139-49.

[5]. Tapias V, et al. Melatonin and its brain metabolite N(1)-acetyl-5-methoxykynuramine prevent mitochondrial nitric oxide synthase induction in parkinsonian mice. J Neurosci Res. 2009 Oct;87(13):3002-10.

[6]. Tan DX, et al. Melatonin directly scavenges hydrogen peroxide: a potentially new metabolic pathway of melatonin biotransformation. Free Radic Biol Med. 2000 Dec;29(11):1177-85.

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA