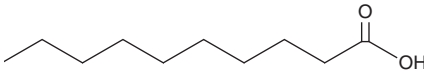
PRODUCT INFORMATION

Decanoic Acid

Item No. 46905

CAS Registry No.:	334-48-5
Synonyms:	C10:0, Capric Acid, Decylic Acid, FA 10:0
MF:	$C_{10}H_{20}O_2$
FW:	172.3
Purity:	≥98%
Supplied as:	A 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

Decanoic acid is supplied as a solid. A stock solution may be made by dissolving the decanoic acid in the solvent of choice, which should be purged with an inert gas. Decanoic acid is soluble (≥10 mg/ml) in ethanol and DMSO.

Description

Decanoic acid is a medium-chain saturated fatty acid. It is a non-competitive antagonist at AMPA receptors that selectively reduces glutamate-induced currents in *Xenopus* oocytes expressing GluA2 and GluA3 AMPA receptors (IC_{50} = 0.52 mM) over those expressing GluA1 (IC_{50} = 2.09 mM) or GluA1 and GluA2 (IC_{50} = 1.16 mM).[1] It inhibits epileptiform activity induced by pentylenetetrazole (PTZ; Item No. 18682) or low magnesium in rat hippocampal slices. Decanoic acid (1 mM) induces contractions in isolated guinea pig duodenum, an effect that can be blocked by the muscarinic acetylcholine receptor (mAChR) antagonist hyoscine (scopolamine; Item No. 40307), voltage-gated sodium channel inhibitor tetrodotoxin (Item Nos. 14964 | 14963), or M_2 mAChR antagonist hexamethonium (Item No. 25505).[2] It increases the escape threshold in an orofacial mechanical stimulation test in rats, indicating analgesic activity, an effect that can be blocked by the mAChR antagonist methoctramine.[3] Plasma levels of decanoic acid are increased in patients with colorectal cancer when compared to patients with breast cancer or ulcerative colitis or without cancer.[4]

References

1. Zhang, P., Li, X.-M., Wang, J.-N., *et al.* New butenolide derivatives from the marine-derived fungus Paecilomyces variotii with DPPH radical scavenging activity. *Phytochem. Lett.* **11**, 85-88 (2015).
2. Sun, W., Luan, S., Qi, C., *et al.* Aspulvinone O, a natural inhibitor of GOT1 suppresses pancreatic ductal adenocarcinoma cells growth by interfering glutamine metabolism. *Cell Commun. Signal.* **17(1)**, 111 (2019).
3. Sawadjoon, S., Kittakoop, P., Isaka, M., *et al.* Antiviral and antiplasmodial spirodihydrobenzofuran terpenes from the fungus Stachybotrys nephrospora. *Planta Med.* **70(11)**, 1085-1087 (2004).
4. Spencer, C.F., Rodin, J.O., Walton, E., *et al.* Novobiocin. VII. Synthesis of novobiocic acid, dihydronovobiocic acid and cyclonovobiocic acid. *J. Am. Chem. Soc.* **80(1)**, 140-143 (1958).

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.

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