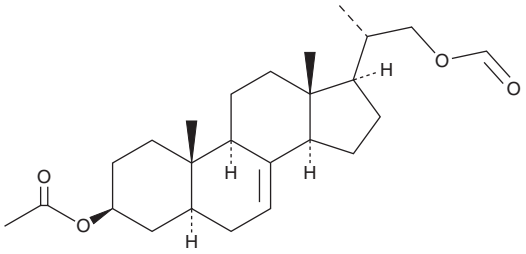
PRODUCT INFORMATION

SH-42

Item No. 34677

CAS Registry No.:	2143952-36-5
Formal Name:	(3β,5α,20S)-3-acetate 21-formate, 20-methyl-pregn-7-ene-3,21-diol
MF:	$C_{25}H_{38}O_4$
FW:	402.6
Purity:	≥95%
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

SH-42 is supplied as a solid. A stock solution may be made by dissolving the SH-42 in the solvent of choice, which should be purged with an inert gas. SH-42 is soluble in the organic solvent chloroform at a concentration of approximately 10 mg/ml.

Description

SH-42 is an inhibitor of Δ^{24}-dehydrocholesterol reductase (DHCR24; IC_{50} = 4.2 nM).[1] It increases serum levels of desmosterol (24-dehydro cholesterol; Item No. 14943), the immediate precursor of cholesterol (Item No. 9003100) in the Bloch pathway, in mice when administered at a dose of 0.5 mg/animal per day. SH-42 increases levels of arachidonic acid (Item Nos. 90010 | 90010.1 | 10006607) and its metabolite prostaglandin E_2 (PGE_2; Item No. 14010), as well as docosahexaenoic acid (Item No. 90310) and its metabolites 19,20-EpDPA and 19,20-DiHDPA, in the peritoneal lavage fluid in a mouse model of peritonitis induced by zymosan A (Item No. 21175).[2] SH-42 (0.5 mg/animal three times per week) decreases disease severity in mice expressing liver X receptor α (LXRα-positive) but not LXRα-deficient mice in a model of hepatic steatosis induced by a high-fat high-cholesterol diet.[3]

References

1. Müller, C., Hemmers, S., Bartl, N., *et al.* New chemotype of selective and potent inhibitors of human delta 24-dehydrocholesterol reductase. *Eur. J. Med. Chem.* **140**, 305-320 (2017).
2. Körner, A., Zhou, E., Müller, C., *et al.* Inhibition of Δ24-dehydrocholesterol reductase activates pro-resolving lipid mediator biosynthesis and inflammation resolution. *Proc. Natl. Acad. Sci. USA* **116(41)**, 20623-20634 (2019).
3. Zhou, E., Ge, X., Nakashima, H., *et al.* Inhibition of DHCR24 activates LXRα to ameliorate hepatic steatosis and inflammation. *EMBO Mol. Med.* e16845 (2023).

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