

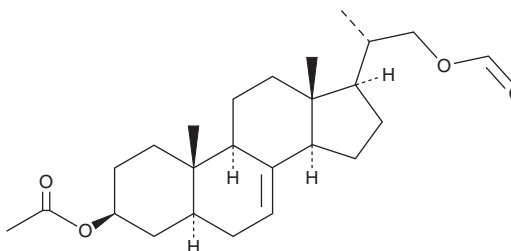
# PRODUCT INFORMATION



**SH-42**

Item No. 34677

**CAS Registry No.:** 2143952-36-5  
**Formal Name:** (3 $\beta$ ,5 $\alpha$ ,20S)-3-acetate 21-formate, 20-methyl-pregn-7-ene-3,21-diol  
**MF:** C<sub>25</sub>H<sub>38</sub>O<sub>4</sub>  
**FW:** 402.6  
**Purity:**  $\geq$ 95%  
**Supplied as:** A solid  
**Storage:** -20°C  
**Stability:**  $\geq$ 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  $\Delta^{24}$ -dehydrocholesterol reductase (DHCR24; IC<sub>50</sub> = 4.2 nM).<sup>1</sup> 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<sub>2</sub> (PGE<sub>2</sub>; 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).<sup>2</sup> SH-42 (0.5 mg/animal three times per week) decreases disease severity in mice expressing liver X receptor  $\alpha$  (LXR $\alpha$ -positive) but not LXR $\alpha$ -deficient mice in a model of hepatic steatosis induced by a high-fat high-cholesterol diet.<sup>3</sup>

## 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  $\Delta^{24}$ -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 LXR $\alpha$  to ameliorate hepatic steatosis and inflammation. *EMBO Mol. Med.* e16845 (2023).

### 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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