

## Product Information

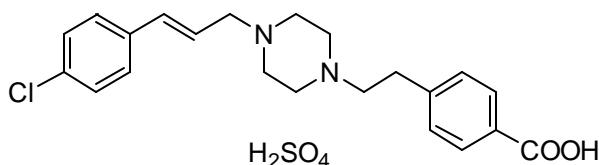
### BM 15766 sulfate

Product Code **B 8685**

Storage Temperature 2-8 °C

CAS RN: 86621-94-5 (sulfate 1:1)  
 86621-92-3 (free acid)

Synonym: 4-[2-[4-[3-(4-Chlorophenyl)-2-propenyl]-1-piperazinyl]ethyl]benzoic acid sulfate



#### Product Description

Molecular Formula: C<sub>22</sub>H<sub>25</sub>ClN<sub>2</sub>O<sub>2</sub>S . H<sub>2</sub>SO<sub>4</sub>

Molecular Weight: 482.98

A new piperazine derivative, BM 15766, inhibits the biosynthesis of cholesterol at the 7-dehydrocholesterol- $\delta$  7-reductase step. Rats treated with BM 15766 showed a marked reduction in total sterol content in serum with simultaneous reduction of triglycerides. The catalase activity in liver homogenates was unchanged. The acetyltransferase increased only slightly, and the 3-hydroxy-3-methylglutaryl-coenzyme A reductase was augmented by a factor of 2. Distinct proliferation of peroxisomes (PO) in perivenous regions of the hepatic lobules was noted in rats of both sexes.<sup>1</sup> This molecule causes holoprosencephalic brain anomalies. Under certain experimental conditions, other anomalies (of the limbs and male genitalia) are also observed. Assays performed by gas chromatography-mass spectrometry (GC-MS) show hypocholesterolemia and an accumulation of precursors. These data indicate that this animal model can be considered a model of Smith-Lemli-Opitz (SLO) syndrome - a recessive autosomal genetic disease attributed to a deficit in 7-dehydrocholesterol reductase. The sterol status of SLO patients indicates severe hypocholesterolemia and an

accumulation of precursors: 7-dehydrocholesterol, 8-dehydrocholesterol, and oxidized derivatives. Treatment of rats with agents that block cholesterol synthesis produces a sterol profile reminiscent of Smith-Lemli-Opitz patients, i.e., low levels of cholesterol accompanied by the appearance of its immediate precursor 7-dehydrocholesterol. These results indicate that cholesterol plays a role in embryonic development.<sup>2</sup> In guinea pigs, BM 15766 led to the accumulation of 7- and 8-dehydrocholesterol, both in liver and testis. Testicular meiosis-activating sterol (T-MAS) was not affected.<sup>3</sup>

#### Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

#### Preparation Instructions

Soluble in DMSO at 4 mg/mL. Insoluble in water.

#### Storage/Stability

Store at 2-8 °C.

#### References

1. Baumgart, E., et al., Proliferation of peroxisomes in pericentral hepatocytes of rat liver after administration of a new hypocholesterolemic agent (BM 15766). Sex-dependent ultrastructural differences., *Lab Invest.* **56**, 554-564 (1987).
2. Roux, C., et al., Role of cholesterol in embryonic development., *Am. J. Clin. Nutr.*, **71**, 1270S-1279S (2000).
3. Lindenthal, B., et al., Influence of simvastatin, pravastatin, and BM 15.766 on neutral sterols in liver and testis of guinea pigs., *Metabolism* , **51**, 492-499 (2002).

AH,PHC 04/05-1

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