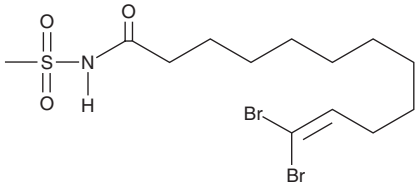
PRODUCT INFORMATION

DDMS

Item No. 10018

CAS Registry No.:	206052-03-1
Formal Name:	12,12-dibromo-N-(methylsulfonyl)-11-dodecenamide
Synonym:	Dibromo-dodecenyl-methylsulfimide
MF:	$C_{13}H_{23}Br_2NO_3S$
FW:	433.2
Purity:	≥98%
Supplied as:	A crystalline 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

DDMS is supplied as a crystalline solid. A stock solution may be made by dissolving the DDMS in the solvent of choice. DDMS is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of DDMS in ethanol and DMF is approximately 30 mg/ml and 20 mg/ml in DMSO.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of DDMS can be prepared by directly dissolving the crystalline solid in aqueous buffers. DDMS has a solubility of approximately 0.5 mg/ml in a 1:10 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Biosynthesis of 20-HETE from arachidonic acid by the cytochrome P450 4A (CYP450 4A) isoforms is an important component of vascular homeostasis, especially in renal circulation.[1] DDMS is a mechanism-based, irreversible inhibitor that has about 10-fold selectivity for the CYP4A2 enzyme which predominantly synthesizes 20-HETE in the mammalian kidney. DDMS administration in whole anesthetized rats (10 mg/kg) largely ablates the hypotension and vasodilation induced by nitric oxide donors such as NONOates.[2]

References

1. Lasker, J.M., Chen, W.B., Wolf, I., *et al.* Formation of 20-hydroxyeicosatetraenoic acid, a vasoactive and natriuretic eicosanoid, in human kidney. Role of CYP4F2 and CYP4A11. *J. Biol. Chem.* **275(6)**, 4118-4126 (2000).
2. Alonso-Galicia, M., Drummond, H.A., Reddy, K.K., *et al.* Inhibition of 20-HETE production contributes to the vascular responses to nitric oxide. *Hypertension* **29(1 pt 2)**, 320-325 (1997).

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