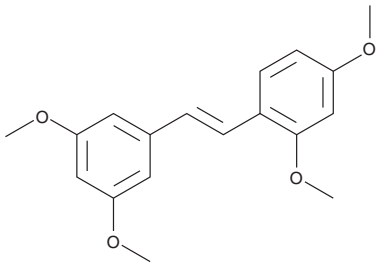
PRODUCT INFORMATION

TMS

Item No. 10038

CAS Registry No.:	24144-92-1
Formal Name:	1-[(1E)-2-(3,5-dimethoxyphenyl) ethenyl]-2,4-dimethoxy-benzene
Synonym:	2,3',4,5'-Tetramethoxystilbene
MF:	$C_{18}H_{20}O_4$
FW:	300.4
Purity:	≥98%
Stability:	≥2 years at -20°C
Supplied as:	A crystalline solid
UV/Vis.:	λ_{max}: 302, 326 nm



Laboratory Procedures

For long term storage, we suggest that TMS be stored as supplied at -20°C. It should be stable for at least two years.

TMS is supplied as a crystalline solid. A stock solution may be made by dissolving the TMS in an organic solvent purged with an inert gas. TMS is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of TMS in these solvents is approximately 400 µg/ml, 30 mg/ml, and 20 mg/ml, respectively.

TMS is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, TMS should first be dissolved in DMF and then diluted with the aqueous buffer of choice. TMS has a solubility of 500 µg/ml in a 1:1 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

CYP1B1 is mainly an extrahepatic enzyme which oxidatively metabolizes both endogenous (steroids; eicosanoids) and exogenous xenobiotics such as polyaromatic hydrocarbons. TMS is a potent and selective inhibitor of CYP1B1, with an IC_{50} of 6 nM.[1] It is 50-fold selective for the inhibition of CYP1B1 *vs.* CYP1A1, making it a useful tool to differentiate between various CYP450 families.[1] In cultured human colon cancer cells, TMS induces apoptosis and inhibits cell growth with an IC_{50} of 0.8 µg/ml.[2]

References

1. Kim, S., Ko, H., Park, J.E., *et al.* Design, synthesis, and discovery of novel *trans*-stilbene analogues as potent and selective human cytochrome P450 1B1 inhibitors. *J. Med. Chem.* **45,** 160-164 (2002).
2. Nam, K.A., Kim, S., Heo, Y.H., *et al.* Resveratrol analog, 3,5,2',4'-tetramethoxy-*trans*-stilbene, potentiates the inhibition of cell growth and induces apoptosis in human cancer cells. *Arch. Pharm. Res.* **24(5),** 441-445 (2001).

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