

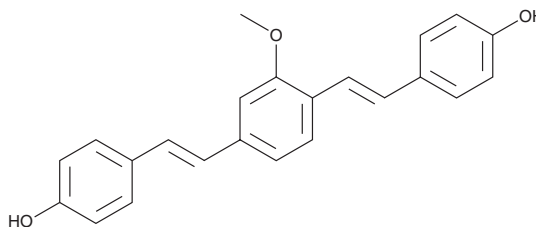
PRODUCT INFORMATION



Methoxy-X04

Item No. 20476

CAS Registry No.: 863918-78-9
Formal Name: 4,4'-[(2-methoxy-1,4-phenylene)di-(1E)-2,1-ethenediyl]bis-phenol
MF: C₂₃H₂₀O₃
FW: 344.4
Purity: ≥95%
UV/Vis.: λ_{max}: 371 nm
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

Methoxy-X04 is supplied as a crystalline solid. A stock solution may be made by dissolving the methoxy-X04 in the solvent of choice, which should be purged with an inert gas. Methoxy-X04 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of methoxy-X04 in ethanol is approximately 5 mg/ml and approximately 30 mg/ml in DMSO and DMF.

Methoxy-X04 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, methoxy-X04 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Methoxy-X04 has a solubility of approximately 0.33 mg/ml in a 1:2 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Methoxy-X04 is a brain-permeable fluorescent probe for amyloid-β (Aβ) to detect and quantify plaques, tangles, and cerebrovascular amyloid.¹ It displays high *in vitro* binding affinity (K_i = 26.8 nM) for fibrillar β-sheet deposits and is used to image Aβ plaques in the brains of living APP/PS1 mice, a transgenic model of familial Alzheimer's disease.^{1,2} For *in vivo* imaging, APP/PS1 mice were injected with methoxy-X04 at a dose of 10 mg/kg, i.p., 24 hours prior to two-photon imaging.² Methoxy-X04 displays an excitation peak at 750 nm with emission between 460 and 500 nm.²

References

1. Klunk, W.E., Backsai, B.J., Mathis, C.A., *et al.* Imaging Aβ plaques in living transgenic mice with multiphoton microscopy and methoxy-X04, a systemically administered Congo red derivative. *J. Neuropathol. Exp. Neurol.* **61(9)**, 797-805 (2002).
2. Burgold, S., Bittner, T., Dorostkar, M.M., *et al.* In vivo multiphoton imaging reveals gradual growth of newborn amyloid plaques over weeks. *Acta. Neuropathol.* **121(3)**, 327-335 (2011).

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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CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM