

Product Name: Methoxy-X04

Catalog No.: 4920

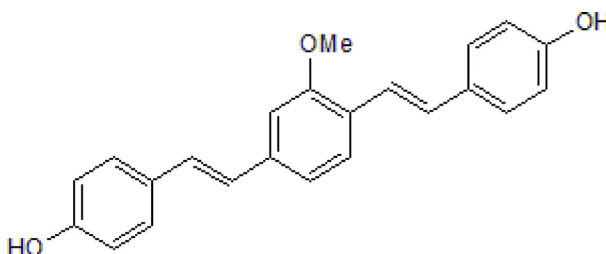
Batch No.: 4

CAS Number: 863918-78-9

IUPAC Name: 4,4'-[(2-methoxy-1,4-phenylene)di-(1E)-2,1-ethenediyl]bisphenol

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₂₃H₂₀O₃.
Batch Molecular Weight: 344.4
Physical Appearance: Pale yellow solid
Solubility: DMSO to 100 mM
 ethanol to 10 mM
Storage: Store at +4°C
Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 100.0% purity at 372 nm
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	80.21	5.85	0
Found	79.91	5.92	0.05

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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Description:

Methoxy-X04 is a fluorescent amyloid β ($A\beta$) probe for the detection and quantification of plaques, tangles and cerebrovascular amyloid. Methoxy-X04 displays high in vitro binding affinity ($K_i = 26.8$ nM); binds selectively to fibrillar β -sheet deposits. Methoxy-X04 is a derivative of Congo Red (Cat. No. 5167). Methoxy-X04 can be used for in vivo $A\beta$ plaque labeling. Methoxy-X04 co-localizes with CD68+ phagosomes in plaque-associated Iba1+ microglia; and it labels molecularly distinct plaque-associated microglia populations. Brain penetrant. Em/Ex $\lambda = 370/452$ nm respectively. Please see product specific page on www.tocris.com for full description.

Physical and Chemical Properties:

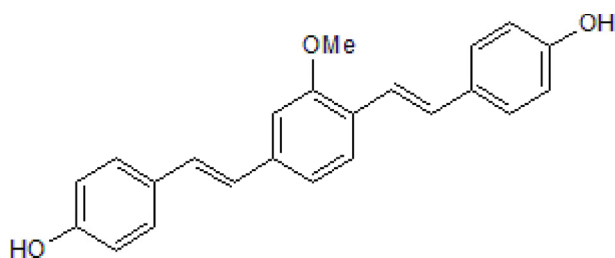
Batch Molecular Formula: $C_{23}H_{20}O_3$.

Batch Molecular Weight: 344.4

Physical Appearance: Pale yellow solid

Minimum Purity: $\geq 98\%$

Batch Molecular Structure:



References:

Grubman et al (2021) Transcriptional signature in microglia associated with $A\beta$ plaque phagocytosis. *Nat. Commun.* **12** 3015. PMID: 34021136.

Heneka et al (2013) NLRP3 is activated in Alzheimer's disease and contributes to pathology in APP/PS1 mice. *Nature.* **493** 674. PMID: 23254930.

Yamanaka et al (2012) PPAR γ /RXR α -induced and CD36-mediated microglial amyloid- β phagocytosis results in cognitive improvement in amyloid precursor protein/presenilin 1 mice. *J. Neurosci.* **32** 17321. PMID: 23197723.

Storage: Store at +4°C

CAUTION - This product is light sensitive and we recommend that the solid material and any solutions obtained are protected from exposure to light.

Solubility & Usage Info:

DMSO to 100 mM

ethanol to 10 mM

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. *Unless contradicted by product-specific protocols or instructions, our standard recommendations apply:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

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