

Product Name: K 114

Catalog No.: 3144

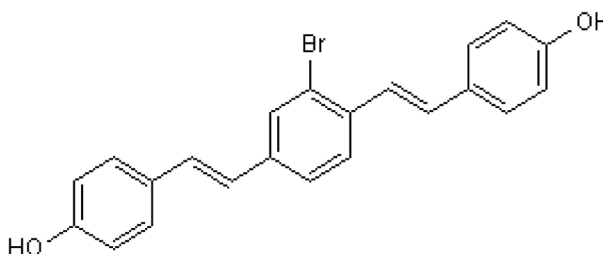
Batch No.: 3

CAS Number: 872201-12-2

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

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₂₂H₁₇BrO₂
Batch Molecular Weight: 393.27
Physical Appearance: Yellow solid
Solubility: DMSO to 100 mM
 ethanol to 50 mM
Storage: Store at +4°C
Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.2 (Ethyl acetate:Petroleum ether [4:1])
HPLC: Shows 98.6% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure
Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	67.19	4.36	
Found	66.79	4.26	

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

Product Name: K 114

Catalog No.: 3144

3

CAS Number: 872201-12-2

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

Description:

Key information: K 114 is a potent amyloid fibril-specific fluorescent probe ($EC_{50} = 20 - 30$ nM). Used for: amyloid fibril detection. Application: fluorescence microscopy, confocal microscopy. Properties and Photophysical Data: K 114 exhibits minimal fluorescence in aqueous buffers and fluoresces brightly in the presence of A β (1-40), α -synuclein and tau in situ. K 114 fluorescence is pH-dependent. Excitation and emission maxima (λ) are 370nm and 450 nm, respectively, at pH 8.5; excitation and emission maxima (λ) are 395nm and 520 nm, respectively, at pH 10.5.

Physical and Chemical Properties:

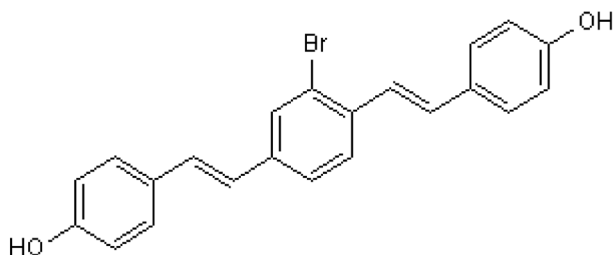
Batch Molecular Formula: C₂₂H₁₇BrO₂

Batch Molecular Weight: 393.27

Physical Appearance: Yellow solid

Minimum Purity: $\geq 98\%$

Batch Molecular Structure:



References:

Stepanchuk et al (2021) Complex photophysical properties of K114 make for a versatile fluorescent probe for amyloid detection. ACS Chem.Neurosci. **12** 1273. PMID: 33705095.

LeVine (2005) Mechanism of A β (1-40) fibril-induced fluorescence of (trans-trans)-1-bromo-2,5-bis(4-hydroxystyryl)benzene (K114). Biochemistry **44** 15937. PMID: 16313197.

Crystal et al (2003) A comparison of amyloid fibrillogenesis using the novel fluorescent compound K114. J.Neurochem. **86** 1359. PMID: 12950445.

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 50 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.

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

bio-techne.com

info@bio-techne.com

techsupport@bio-techne.com

North America

Tel: (800) 343 7475

China

info.cn@bio-techne.com

Tel: +86 (21) 52380373

Europe Middle East Africa

Tel: +44 (0)1235 529449

Rest of World

www.tocris.com/distributors

Tel:+1 612 379 2956