

Certificate of Analysis

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Product Name: Congo Red

Catalog No.: 5167

Batch No.: 1

CAS Number: 573-58-0

EC Number: 209-358-4

IUPAC Name: 3,3'-[(1,1'-Biphenyl)-4,4'-diyl-bis(2,1-diazenediyl)]bis(4-amino-1-naphthalenesulfonic acid) disodium salt

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{32}H_{22}N_6Na_2O_6S_2 \cdot 5\frac{1}{2}H_2O$

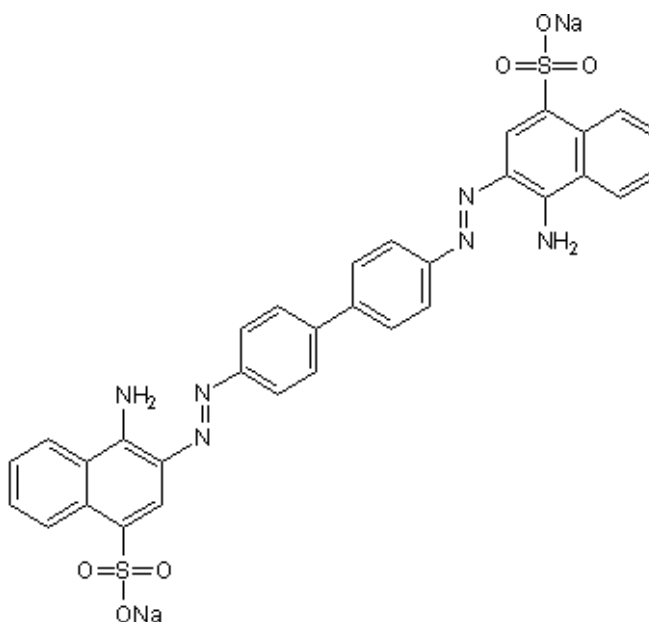
Batch Molecular Weight: 795.74

Physical Appearance: Dark red solid

Solubility: water to 10 mM
DMSO to 10 mM

Storage: Store at RT

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.7% purity

¹H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Absorption: λ_{max} = 490nm (Water, pH 5)

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

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Description:

VGLut inhibitor; decreases synaptic transmission in the dentate gyrus. Also an amyloid fibril-binding dye; inhibits Fib-beta A neurotoxicity by inhibiting fibril formation or by binding to preformed fibrils. Also inhibits the pancreatic islet cell toxicity of diabetes-associated amylin. Excitation wavelength is 497 nm.

Physical and Chemical Properties:

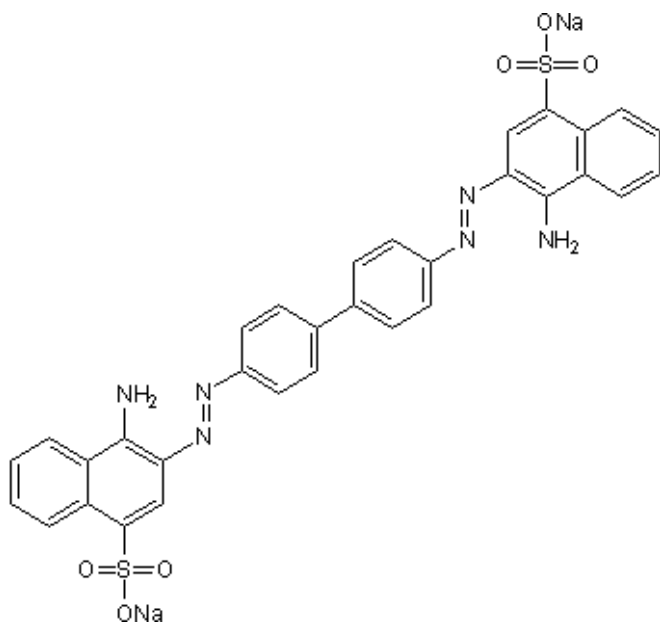
Batch Molecular Formula: C₃₂H₂₂N₆Na₂O₆S₂.5 ½H₂O

Batch Molecular Weight: 795.74

Physical Appearance: Dark red solid

Minimum Purity: >98%

Batch Molecular Structure:



Storage: Store at RT

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:

water to 10 mM

DMSO 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. Our standard recommendations are:

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.

References:

Neale et al (2013) Modulation of hippocampal synaptic transmission by the kynurenine pathway member xanthurenic acid and other VGLUT inhibitors. *Neuropsychopharmacology*. **38** 1060. PMID: 23303071 .

Neale et al (2013) Effect of VGLUT inhibitors on glutamatergic synaptic transmission in the rodent hippocampus and prefrontal cortex. *Neurochem.Int.* **73** 159. PMID: 24121008.

Lorenzo et al (1994) Beta-amyloid neurotoxicity requires fibril formation and is inhibited by congo red. *Proc.Natl.Acad.Sci.USA* **91** 12243. PMID: 7991613.

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