

Product Name: Thioflavin T

Catalog No.: 7122

Batch No.: 2

CAS Number: 2390-54-7

IUPAC Name: 2-[4-(Dimethylamino)phenyl]-3,6-dimethylbenzothiazolium chloride

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₇H₁₉ClN₂S

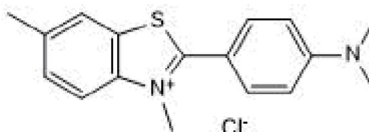
Batch Molecular Weight: 318.86

Physical Appearance: Yellow solid

Solubility: DMSO to 5 mM
water to 10 mM

Storage: Store at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 98.3% purity

¹H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Net Product Content: 66%

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

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IUPAC Name: 2-[4-(Dimethylamino)phenyl]-3,6-dimethylbenzothiazolium chloride

Description:

Key information: Thioflavin T is a cell-permeable fluorescent amyloid stain. Used for: staining of insoluble senile plaques of A β in brain tissues, monitoring the kinetics of in vitro polyglutamine amyloid formation of tNhtt-42Q aggregates in a Huntington's disease cell model. Thioflavin T is used to confirm formation of β sheet structure from mutant huntingtin exon-1 aggregates (Ex1Q48) in vitro. Application: fluorescence microscopy. Properties and Photophysical Data: Thioflavin T is a cationic benzothiazole. It increases in fluorescence upon strong binding ($K_i = 580$ nM) to the stacked β sheets of amyloid fibrils. Excitati... Please see product specific page on www.tocris.com for full description.

Physical and Chemical Properties:

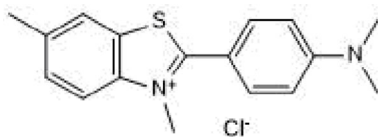
Batch Molecular Formula: C₁₇H₁₉ClN₂S

Batch Molecular Weight: 318.86

Physical Appearance: Yellow solid

Minimum Purity: $\geq 95\%$

Batch Molecular Structure:



References:

Schindler (2021) Small, seeding-competent huntingtin fibrils are prominent aggregate species in brains of zQ175 Huntington's disease knock-in mice. *Front.Neurosci.* **15** 682172. PMID: 34239412.

Lee et al (2019) Fluorescence chemicals to detect insoluble and soluble amyloid- β aggregates. *ACS Chem.Neurosci.* **10** 2647. PMID: 31009195.

Doi et al (2008) RNA-binding protein TLS is a major nuclear aggregate-interacting protein in huntingtin exon 1 with expanded polyglutamine-expressing cells. *J.Biol.Chem.* **283** 6489. PMID: 18167354.

Storage: Store at -20°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 5 mM

water 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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