# Data Sheet (Cat.No.T19066)

TargetMol

## Thioflavine S

### Chemical Properties


CAS No. : 1326-12-1

Formula:

Molecular Weight:

Storage: Keep away from direct sunlight
Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

### Biological Description

| | |
|---|---|
| Description | Thioflavine S (Direct Yellow 7) is a fluorescent histochemical marker. |
| Targets(IC50) | Others |
| Cell Research | Instructions<br>I. Solution preparation<br>1. Stock solution: Prepare Thioflavine S into a 0.05-0.1% (w/v) solution. The solvent can be deionized water or PBS. If necessary, filter the solution to remove particles.<br>2. Working solution: Dilute the stock solution to the working concentration according to the experimental needs, usually 0.01-0.1% (w/v). The specific concentration depends on the experimental requirements.<br>II. Operation steps<br>1. Tissue preparation: Tissue samples should be fixed with formalin or paraformaldehyde before paraffin embedding or frozen sectioning.<br>2. Staining: Add the working solution to the tissue sections and incubate at room temperature for 10-30 minutes. The specific time depends on the tissue type and the required staining intensity.<br>3. Washing: Wash the sections with PBS to remove excess dye and avoid background fluorescence.<br>4. Sealing: Use an appropriate sealing solution (such as glycerol or fluorescent sealing solution) to seal the stained sections.<br>5. Fluorescence detection:<br>1) Microscopic observation: Observe the stained sections using a fluorescence microscope. Thioflavine S is excited at a wavelength of about 450 nm and emits at a wavelength of about 485 nm.<br>2) Observation results: Amyloid plaques bound to Thioflavine S will appear bright green or yellow-green under appropriate fluorescence conditions.<br>6. Calibration and control:<br>1) Control group: Use samples known to contain amyloid deposits as positive controls, and set unstained or undyed sections as negative controls.<br>2) Standard curve: A standard curve between fluorescence intensity and amyloid load can be established by using tissue samples known to contain amyloid plaques.<br>Notes: |

| | |
|---|---|
| Cell Research | 1) Photosensitivity: Thioflavine S is light-sensitive and should be avoided from exposure to strong light during staining and storage.<br>2) Storage conditions: Thioflavine S solution should be stored in a cool, dark place, ideally at 4°C. Avoid repeated freezing and thawing.<br><br>The above information is based on published literature. Experimental procedures should be appropriately modified to meet specific research demands. |

## Solubility Information

| | |
|---|---|
| Solubility | Ethanol: < 1 mg/mL (insoluble)<br>H2O: 45 mg/mL,Sonication is recommended.<br>(< 1 mg/ml refers to the product slightly soluble or insoluble) |

Reference

Li W,et al. Delayed Magnetic Resonance Imaging of Alzheimer's Disease by Using Poly(2-(methacryloyloxy)ethyl phosphorylcholine)-Functionalized Nanoprobes. ACS Appl Mater Interfaces. 2024 Dec 18;16(50):69045-69054.
Yokoyama Y, et al. Transmembrane protein 106B amyloid is a potential off-target molecule of tau PET tracers in the choroid plexus. Nucl Med Biol. 2024 Dec 2;142-143:108986.
Zhang Y, et al. Formononetin alleviates no reflow after myocardial ischemia-reperfusion via modulation of gut microbiota to inhibit inflammation. Life Sci. 2024 Dec 1;358:123110.