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# DATASHEET

Thioflavin T (ThT)

## Product overview

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|---|---|
| **Name** | Thioflavin T (ThT) |
| **Cat No** | HB7143 |
| **Biological description** | Cell-permeable fluorescent amyloid stain for *in vitro* amyloid beta staining in brain tissues. Used to detect amyloid fibrils and to study amyloid fibril structure and the mechanism by which they form. Stains insoluble senile Aβ plaques, confirms formation of β-sheet structure from mutant huntingtin exon-1 aggregates *in vitro* and may also be used to monitor polyglutamine amyloid formation of tNhtt-42Q aggregates in Huntington's diseases models *in vitro*. |
| **Alternative names** | Thioflavin T |
| **Biological action** | Dyes & stains |
| **Purity** | >95% |
| **Description** | Cell-permeable fluorescent amyloid stain |

## Biological Data

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| **Application notes** | Please see our Amyloid Beta Protocol |

## Solubility & Handling

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| **Storage instructions** | -20°C |
| **Solubility overview** | Soluble in water (10 mM), and in DMSO (5 mM) |
| **Important** | This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use |

## Chemical Data

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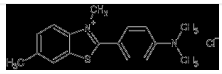
|---|---|
| **Chemical name** | 2-[4-(Dimethylamino)phenyl]-3,6-dimethylbenzothiazolium chloride |
| **Molecular Weight** | 318.9 |
| **Chemical structure** |  |
| **Molecular Formula** | $C_{17}H_{19}ClN_2S$ |
| **CAS Number** | 2390-54-7 |
| **PubChem identifier** | 16853 |
| **SMILES** | CC1=CC2=C(C=C1)[N+](=C(S2)C3=CC=C(C=C3)N(C)C)C.[Cl-] |
| **InChiKey** | JADVWWSKYZXRGX-UHFFFAOYSA-M |
| **Appearance** | Yellow solid |

## References

**Mechanism of thioflavin T binding to amyloid fibrils.**

Khurana R et al (2005) Journal of structural biology 151
**PubMedID** 16125973

**Thioflavin T fluoresces as excimer in highly concentrated aqueous solutions and as monomer being incorporated in amyloid**

**fibrils.**

Sulatskaya AI et al (2017) Scientific reports 7
**PubMedID** 28526838

**The binding of thioflavin-T to amyloid fibrils: localisation and implications.**

Krebs MR et al (2005) Journal of structural biology 149
**PubMedID** 15629655