

Hello Bio, Inc.  
304 Wall St., Princeton, NJ 08540 USA

T. 609-683-7500  
F. 609-228-4994

customer-care-usa@m2stage.hellobio.com



## DATASHEET

T3 (triiodothyronine)

### Product overview

|                          |  |
|--------------------------|--|
| <b>Name</b>              | T3 (triiodothyronine)  |
| <b>Cat No</b>            | HB7470   |
| <b>Alternative names</b> | Thyroid hormone triiodothyronine (T3),                           |
| <b>Biological action</b> | Other  |
| <b>Purity</b>            | >98%   |
| <b>Description</b>       | Thyroid hormone. Frequently used in various stem cell protocols. |

### Biological Data

**Biological description** Thyroid hormone with many biological actions. It is essential for embryogenesis and brain development, T3 increases neuronal differentiation.

It is frequently used as part of various stem cell related protocols:

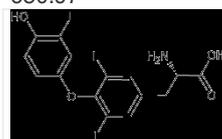
- Promotes neuronal differentiation of embryonic neural stem cells (eNSCs)
- Beneficial for stem cell maintenance and promotes trophoblast differentiation and improves cell survival and passaging efficiency.
- Used when generating hiPSC-cardiomyocytes (hiPSC-CM)
- Aids generation of cortical spheroids from hPSCs and culture of 3D spheroids.

### Solubility & Handling

|                             |  |
|-----------------------------|--|
| <b>Storage instructions</b> | -20 °C   |
| <b>Solubility overview</b>  | Soluble in DMSO (50 mM)  |
| <b>Important</b>            | This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use |

### Chemical Data

**Chemical name** O-(4-Hydroxy-3-iodophenyl)-3,5-diiodo-L-tyrosine  
**Molecular Weight** 650.97  
**Chemical structure**



**Molecular Formula** C<sub>15</sub>H<sub>12</sub>I<sub>3</sub>NO<sub>4</sub>  
**CAS Number** 6893-02-3  
**PubChem identifier** 5920  
**SMILES** C1=CC(=C(C=C1OC2=C(C=C(C=C2I)C[C@@H](C(=O)O)N)I)I)O  
**InChi** InChI=1S/C15H12I3NO4/c16-9-6-8(1-2-13(9)20)23-14-10(17)3-7(4-11(14)18)5-12(19)15(21)22/h1-4,6,12,20H,5,19H2,(H,21,22)/t12-m/s1  
**InChiKey** AUYYCJSJGJYCDS-LBPRGKRZSA-N

## References

**Thyroid hormone enhances stem cell maintenance and promotes lineage-specific differentiation in human embryonic stem cells.**

Deng C et al (2022) Stem cell research & therapy 13  
**PubMedID** [35313973](#)

**Thyroid hormone promotes neuronal differentiation of embryonic neural stem cells by inhibiting STAT3 signaling through TRα1.**

Chen C et al (2012) Stem cells and development 21  
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**Thyroid and Glucocorticoid Hormones Promote Functional T-Tubule Development in Human-Induced Pluripotent Stem Cell-Derived Cardiomyocytes.**

Parikh SS et al (2017) Circulation research 121  
**PubMedID** [28974554](#)

**The nuclear receptor THRB facilitates differentiation of human PSCs into more mature hepatocytes.**

Ma H et al (2022) Cell stem cell 29  
**PubMedID** [35452598](#)

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