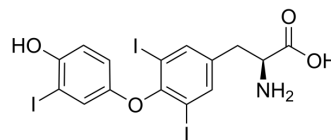


Liothyronine (GMP)

Cat. No.:	HY-A0070AG
CAS No.:	6893-02-3
Molecular Formula:	C ₁₅ H ₁₂ I ₃ NO ₄
Molecular Weight:	650.97
Target:	Thyroid Hormone Receptor
Pathway:	Vitamin D Related/Nuclear Receptor
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Liothyronine (Triiodothyronine) (GMP) is Liothyronine (HY-A0070A) produced by using GMP guidelines. GMP small molecules work appropriately as an auxiliary reagent for cell therapy manufacture. Liothyronine is a potent thyroid hormone receptors TR α and TR β agonist with K _s of 2.33 nM for hTR α and hTR β , respectively ^[1] .
IC₅₀ & Target	TR β 1 ^{[1][2]}
In Vitro	<p>Liothyronine (GMP) can be used in culture medium for generation of induced pluripotent stem cells from human keratinocytes^[1].</p> <p>Liothyronine (GMP) is necessary in limbal stem cells (LSCs) proliferation and self-renewal^[2].</p> <p>Liothyronine (GMP) (4 nM) promotes cardiac differentiation and maturation of embryonic stem cells^[3].</p> <p>Liothyronine (GMP) (100 Nm, 14 days) promotes electrophysiological maturation of human-induced pluripotent stem cell (hiPSC)-derived cardiomyocytes^[4].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>

REFERENCES

- [1]. Aasen T, et al. Isolation and cultivation of human keratinocytes from skin or plucked hair for the generation of induced pluripotent stem cells. *Nat Protoc.* 2010 Feb;5(2):371-82.
- [2]. Yu M, et al. An important role for adenine, cholera toxin, hydrocortisone and triiodothyronine in the proliferation, self-renewal and differentiation of limbal stem cells in vitro. *Exp Eye Res.* 2016 Nov;152:113-122.
- [3]. CY, et al. Triiodothyronine promotes cardiac differentiation and maturation of embryonic stem cells via the classical genomic pathway. *Mol Endocrinol.* 2010 Sep;24(9):1728-36.
- [4]. Wang L, et al. Triiodothyronine and dexamethasone alter potassium channel expression and promote electrophysiological maturation of human-induced pluripotent stem cell-derived cardiomyocytes. *J Mol Cell Cardiol.* 2021 Dec;161:130-138.

Caution: Product has not been fully validated for medical applications. For research use only.

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