Technical Data Sheet: Triiodothyronine Salt

Catalog Number	SML11F
Synonyms	Liothyronine Sodium, 3,3',5-Triiodo-L-thyronine sodium, T3 Sodium Salt, 3,3',5-Triiodothyronine, Liothyronine, T3 Thyroid Hormone, Triiodothyronine
Size	500 mg
Description	Triiodothyronine Salt is an analog of thyroid hormone that selectively binds to and activates β1 thyroid hormone receptor (TRβ1). This binding, in turn, regulates functions such as growth, metabolic activity, and differentiation (Bhat, et al.). Triiodothyronine Salt has been shown to promote enhanced maturation of cardiomyocyte populations, to the extent that beating cardiomyocytes may be maintained for up to six months (Burridge, et al.), in addition to playing a role in the induction of pluripotent stem cells from human keratinocytes (Aasen & Belmonte).
Molecular Weight	672.96
Molecular Formula	$C_{15}H_{11}I_3NNaO_4$
Chemical Name	L-Tyrosine, O-(4-hydroxy-3-iodophenyl)-3,5-diiodo-, sodium salt (1:1)
CAS Number	55-06-1
Target	Thyroid Hormone Receptor (TRβ1)
Appearance	Off-white to gray (Solid)
Purity	≥95% by LCMS
Solubility and Reconstitution	Soluble in DMSO up to 50 mM, for example: 500 mg/148.597 mL = 3.365 mg/mL = 5 mM 500 mg/74.299 mL = 6.730 mg/mL = 10 mM 500 mg/37.149 mL = 13.459 mg/mL = 20 mM 500 mg/14.860 mL = 33.647 mg/mL = 50 mM
Storage Temperature and Stability	Powder: -20°C 3 years 4°C 2 years In solvent: -80°C 6 months -20°C 1 month

References

Aasen & Belmonte. 2010. Isolation and cultivation of human keratinocytes from skin or plucked hair for the generation of induced pluripotent stem cells. Nature Protocols. 5: 371-382.

Bhat, et al. 1993. Conformational changes of human β1 thyroid hormone receptor induced by binding of 3,3',5-Triiodo-L-thyronine. BiochemBiophys Res Commun. 195(1): 385-392.

Burridge, et al. 2015. Chemically defined culture and cardiomyocyte differentiation of human pluripotent stem cells. Curr Protoc Hum Genet. 87(1): 1-15.

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