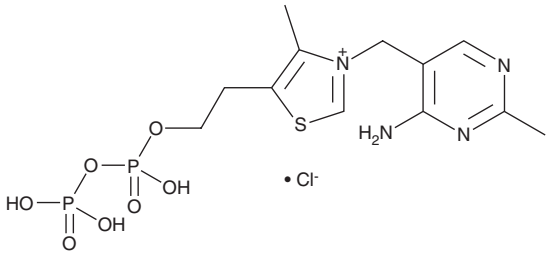
PRODUCT INFORMATION

Thiamine Pyrophosphate (chloride)

Item No. 20254

CAS Registry No.: 154-87-0
Formal Name: 3-[(4-amino-2-methyl-5-pyrimidinyl)methyl]-4-methyl-5-(4,6,6-trihydroxy-4,6-dioxido-3,5-dioxa-4,6-diphosphahex-1-yl)-thiazolium, monochloride
Synonyms: Cocarboxylase, TPP, Vitamin B_1 Pyrophosphate
MF: $C_{12}H_{19}N_4O_7P_2S \bullet Cl$
FW: 460.8
Purity: ≥95%
UV/Vis.: λ_{max}: 246 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Thiamine pyrophosphate (TPP) (chloride) is supplied as a crystalline solid. Aqueous solutions of TPP (chloride) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of TPP (chloride) in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

TPP (chloride) is a metabolite of vitamin B_1. It is a cofactor synthesized in the cytosol that is required for the activity of cytosolic transketolase and mitochondrial pyruvate, oxoglutarate, and branched-chain keto acid dehydrogenases.[1] TPP (chloride) prevents hyperglycemia-induced retinopathy and desflurane-induced hepatotoxicity in rats.[2,3]

References

1. Hawkins, C.F., Borges, A., and Perham, R.N. A common structural motif in thiamin pyrophosphate-binding enzymes. *FEBS Lett.* **255(1)**, 77-82 (1989).
2. Cinici, E., Ahiskali, I., Cetin, N., *et al.* Effect of thiamine pyrophosphate on retinopathy induced by hyperglycemia in rats: A biochemical and pathological evaluation. *Indian J. Ophthalmol.* **64(6)**, 434-439
3. Arslan, A., Kuyrukluyildiz, U., Binici, O., *et al.* Can thiamine pyrophosphate prevent desflurane induced hepatotoxicity in rats? *Acta Cir. Bras.* **31(3)**, 168-175 (2016).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.**CAYMANCHEM**.COM