

PRODUCT INFORMATION



DEPMPO-biotin

Item No. 13251

CAS Registry No.: 936224-52-1
Formal Name: N-[3-[[5-[(3aS,4S,6aR)-hexahydro-2-oxo-1H-thieno[3,4-d]imidazol-4-yl]-1-oxopentyl]amino]propyl]-[(2S,3R)-2-(diethoxyphosphinyl)-3,4-dihydro-2-methyl-1-oxido-2H-pyrrol-3-yl]methyl ester-carbamic acid

MF: C₂₄H₄₂N₅O₈PS

FW: 591.7

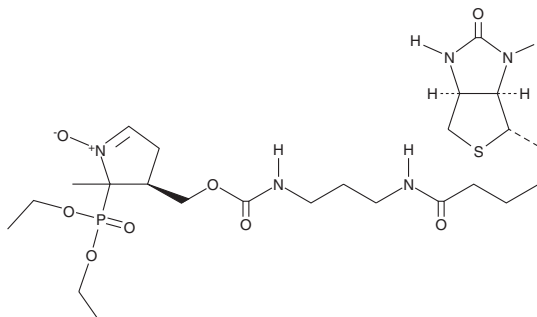
Purity: ≥95%

UV/Vis.: λ_{max}: 202, 241 nm

Supplied as: A solution in ethanol

Storage: -80°C

Stability: ≥2 years



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

Laboratory Procedures

DEPMPO-biotin is supplied as a solution in ethanol. To change the solvent, simply evaporate the ethanol under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as ethanol purged with an inert gas can be used. The solubility of DEPMPO-biotin in ethanol is approximately 10 mg/ml.

If aqueous stock solutions are required for biological experiments, they can best be prepared by diluting the organic solvent into aqueous buffers or isotonic saline. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. We do not recommend storing the aqueous solution for more than one day.

Description

DEPMPO is a nitron that is used to spin trap reactive O-, N-, S-, and C-centered radicals and allow their characterization when used in association with electron spin resonance. It is noted for the stability of adducts formed.¹ DEPMPO can be used *in vitro* or *in vivo*, as it crosses lipid bi-layer membranes and is a good trapping agent in biological systems.^{2,3} DEPMPO-biotin is a biotinylated form of DEPMPO which retains the outstanding persistency of its adducts.⁴ The biotin moiety offers an effective means for monitoring biodistribution in cells, tissues, and organs when used with an avidin-conjugated reporter. Importantly, DEPMPO-biotin binds free radicals, such as S-nitroso groups, on proteins, producing adducts that can be analyzed *via* the biotin tag. This direct labeling of S-nitrosothiols (SNO) thus serves as an effective alternative to the more cumbersome biotin-switch method for monitoring SNO formation.

References

1. Khan, N., Wilmont, C.M., Rosen, G.M., *et al. Free Radic. Biol. Med.* **34**(11), 1473-1481 (2003).
2. Anzai, K., Aikawa, T., Furukawa, Y., *et al. Arch. Biochem. Biophys.* **415**, 251-256 (2003).
3. Liu, K.J., Miyake, M., Panz, T., *et al. Free Radic. Biol. Med.* **26**, 714-721 (1999).
4. Chaliier, F., Hardy, M., Ouari, O., *et al. J. Org. Chem.* **72**, 7886-7892 (2007).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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