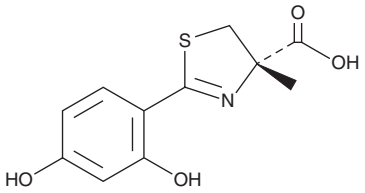
PRODUCT INFORMATION

Deferitrin

Item No. 33328

CAS Registry No.:	239101-33-8
Formal Name:	(4S)-2-(2,4-dihydroxyphenyl)-4,5-dihydro-4-methyl-4-thiazolecarboxylic acid
Synonyms:	GT-56-252, (S)-4'-Hydroxydesazadesferrithiocin
MF:	$C_{11}H_{11}NO_4S$
FW:	253.3
Purity:	≥98%
UV/Vis.:	λ_{max}: 214, 231, 274, 309 nm
Supplied as:	A 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

Deferitrin is supplied as a solid. A stock solution may be made by dissolving the deferitrin in the solvent of choice, which should be purged with an inert gas. Deferitrin is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of deferitrin in these solvents is approximately 12 and 10 mg/ml, respectively. Deferitrin is slightly soluble in ethanol.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of deferitrin can be prepared by directly dissolving the solid in aqueous buffers. The solubility of deferitrin in PBS (pH 7.2) is approximately 0.2 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Deferitrin is an iron chelator and a derivative of desferrithiocin that binds iron in a 2:1 (ligand:iron) ratio.[1,2] It inhibits the proliferation of L1210 murine leukemia cells (IC_{50} = 17 µM).[3] Deferitrin (150 µmol/kg) induces iron excretion in iron-overloaded *C. apella* monkeys and beagle dogs with an iron clearing efficiency (ICE) of 14.5 and 9.3%, respectively.[2] It reduces fecal and urine iron levels by 607 and 357 µg/kg in *C. apella* monkeys and beagle dogs, respectively.

References

1. Bergeron, R.J., Wiegand, J., Bharti, N., *et al.* Desferrithiocin analogue iron chelators: Iron clearing efficiency, tissue distribution, and renal toxicity. *Biometals* **24(2)**, 239-258 (2011).
2. Bergeron, R.J., Wiegand, J., Weimar, W.R., *et al.* Comparison of iron chelator efficacy in iron-overloaded beagle dogs and monkeys (*Cebus apella*). *Comp. Med.* **54(6)**, 664-672 (2004).
3. Bergeron, R.J., Wiegand, J., Weimar, W.R., *et al.* Iron chelation promoted by desazadesferrithiocin analogs: An enantioselective barrier. *Chirality* **15(7)**, 593-599 (2003).

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