

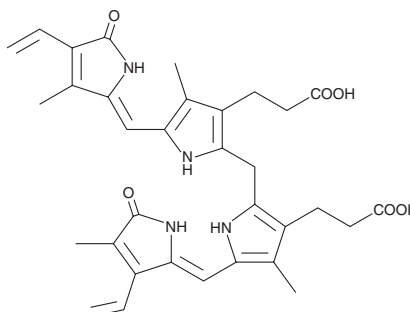
PRODUCT INFORMATION



Bilirubin

Item No. 17161

CAS Registry No.: 635-65-4
Formal Name: 2,17-diethenyl-1,10,19,22,23,24-hexahydro-3,7,13,18-tetramethyl-1,19-dioxo-21H-bilane-8,12-dipropionic acid
Synonyms: Hematoidin, NSC 26685
MF: C₃₃H₃₆N₄O₆
FW: 584.7
Purity: ≥95%
UV/Vis.: λ_{max}: 241, 451 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

Bilirubin is supplied as a crystalline solid. A stock solution may be made by dissolving the bilirubin in the solvent of choice, which should be purged with an inert gas. Bilirubin is soluble in organic solvents such as DMSO, dimethyl formamide, and chloroform. The solubility of bilirubin in these solvents is approximately 0.2, 0.1, and 5 mg/ml, respectively.

Bilirubin is sparingly soluble in aqueous solutions. To enhance aqueous solubility, dilute the organic solvent solution into aqueous buffers or isotonic saline. If performing biological experiments, ensure 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

Bilirubin is a yellow breakdown product of heme catabolism, formed when heme is cleaved by heme oxygenase.¹ This reaction produces carbon monoxide and biliverdin, which is rapidly reduced to bilirubin by biliverdin reductase. Bilirubin has key roles as a free radical scavenger with antioxidant and anti-inflammatory actions.¹ Free and albumin-bound bilirubin can also scavenge nitric oxide (NO) and NO-related species. Unconjugated bilirubin is highly water-insoluble and must be conjugated with glucuronides to become water soluble and subsequently excreted by the liver and kidney.¹

Reference

1. Levitt, D.G. and Levitt, M.D. Quantitative assessment of the multiple processes responsible for bilirubin homeostasis in health and disease. *Clin. Exp. Gastroenterol.* **7**, 307-328 (2014).

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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