

Product Data Sheet

Product Name: Aurothioglucose

Cat. No.: GC35431

Chemical Properties

Cas. No. 12192-57-3

SMILES O[C@@H]1[C@](O[Au+][SH-]2)([H])C2O[C@H](CO)[C@H]1O

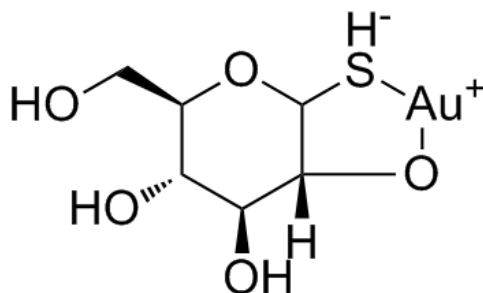
Formula $C_6H_{11}AuO_5S$ M.Wt 392.18

Solubility Water: 125 mg/mL (318.73 mM); Storage Store at -20°C
DMSO: 6 mg/mL (15.30 mM)

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice All other available size: ship with RT, or blue ice upon request.

Structure



Background

Aurothioglucose (Gold thioglucose) is a well known active-site inhibitor of TrxR1, inhibited TrxR1 activity in HeLa cell cytosol but had no effect on the viability of the cells. IC50 value: Target: TrxR1 in vitro: Trx1 redox state and ROS generation were measured in cells exposed to the TrxR1 inhibitors aurothioglucose (ATG) and monomethylarsonous acid (MMA(III)) and in cells depleted of TrxR1 activity by siRNA knock down [1]. in vivo: Adult mice received a single intratracheal dose of 0.375 µg/g lipopolysaccharide (LPS) 12 h before a single intraperitoneal injection of 25 mg/kg ATG. Control

Caution: Product has not been fully validated for medical applications. For research use only.

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mice received intratracheal and/or intraperitoneal saline. ATG treatment significantly attenuated lung injury, increased lung GCLM expression and GSH levels, and decreased mortality. GSH depletion completely prevented the protective effects of ATG in LPS/hyperoxia-exposed mice [2].

[1]. Watson WH, et al. Thioredoxin reductase-1 knock down does not result in thioredoxin-1 oxidation. *Biochem Biophys Res Commun.* 2008 Apr 11;368(3):832-6. [2]. Britt RD Jr, et al. The thioredoxin reductase-1 inhibitor aurothioglucose attenuates lung injury and improves survival in a murine model of acute respiratory distress syndrome. *Antioxid Redox Signal.* 2014 Jun 10;20(17):2681-91.

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