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- Trockeneiszuschlag
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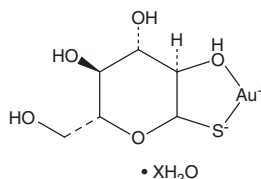
PRODUCT INFORMATION



Aurothioglucose (hydrate)

Item No. 30732

Synonym: Gold Thioglucose
MF: $C_6H_{11}AuO_5S \cdot XH_2O$
FW: 392.2
Purity: $\geq 80\%$
Supplied as: A solid
Storage: $-20^\circ C$
Stability: ≥ 4 years



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

Laboratory Procedures

Aurothioglucose (hydrate) is supplied as a solid. A stock solution may be made by dissolving the aurothioglucose (hydrate) in the solvent of choice, which should be purged with an inert gas. Aurothioglucose (hydrate) is soluble in DMSO.

Description

Aurothioglucose is an inhibitor of thioredoxin reductase (TrxR; $IC_{50} = 0.065 \mu M$ for the human placental enzyme).¹ It is selective for TrxR over glutathione reductase and glutathione peroxidase (GPX; $IC_{50}S = >100$ and $80 \mu M$, respectively). Aurothioglucose ($100 \mu M$) inhibits IL-1 β -induced production of IL-6 and IL-8 in isolated human rheumatoid synovial fibroblasts.² It reduces HIV-1 replication induced by TNF- α in OM10.1 cells latently infected with HIV-1 when used at concentrations of 10 and $25 \mu M$.³ Aurothioglucose (25 mg/kg) improves survival in a mouse model of acute respiratory distress syndrome (ARDS) induced by LPS and hyperoxia.⁴ It induces obesity and increases food intake and blood glucose levels in genetically diabetic KK mice.⁵ Formulations containing aurothioglucose have previously been used in the treatment of rheumatoid arthritis.

References

1. Gromer, S., Arscott, L.D., Williams, C.H., Jr., *et al.* Human placenta thioredoxin reductase. Isolation of the selenoenzyme, steady kinetics, and inhibition by therapeutic gold compounds. *J. Biol. Chem.* **273**(32), 20096-20101 (1998).
2. Yoshida, S., Kato, T., Sakurada, S., *et al.* Inhibition of IL-6 and IL-8 induction from cultured rheumatoid synovial fibroblasts by treatment with aurothioglucose. *Int. Immunol.* **11**(2), 151-158 (1999).
3. Traber, K.E., Okamoto, H., Kurono, C., *et al.* Anti-rheumatic compound aurothioglucose inhibits tumor necrosis factor- α -induced HIV-1 replication in latently infected OM10.1 and Ach2 cells. *Int. Immunol.* **11**(2), 143-150 (1999).
4. Britt, R.D., Jr., Velten, M., Locy, M.L., *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.* **20**(17), 2681-2691 (2014).
5. Matsuo, T. and Shino, A. Induction of diabetic alterations by goldthioglucose-obesity in KK,ICR and C57BL mice. *Diabetologia* **8**(6), 391-397 (1972).

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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