



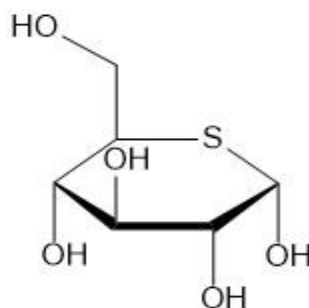
Catalog # 10-1398

5-Thio-D-glucose

CAS# 20408-97-3

5-Thio-5-deoxy-D-glucose; 5TG

Lot # X104123



A potent competitive inhibitor of the cellular transport of glucose and glucose-mediated insulin release.¹ May be used to induce a state of glucose deprivation in laboratory animals.² Stimulates feeding in rat models.³ Induces Alzheimer-like changes in frontal cortex and hippocampus in rats.⁴ Elevates renal TGF- β 1 at a dose that does not prevent streptozotocin diabetes in rats.⁵

- 1) Wang *et al.* (1995) *Glucose transporter 2 expression: prevention of streptozotocin-induced reduction in beta-cells with 5-thio-D-glucose*; Exp. Clin. Endocrinol. Diabetes, **103** 83 Suppl.2
- 2) Shah *et al.* (2019), *Recurrent glucose deprivation leads to the preferential use of lactate by neurons in the ventromedial hypothalamus*; Am. J. Physiol. Endocrinol. Metab., **316** E948
- 3) Li *et al.* (2014), *Stimulation of feeding by three different glucose-sensing mechanisms requires hindbrain catecholamine neurons*; Am. J. Physiol. Regul. Integr. Comp. Physiol., **306** R257
- 4) Salkovic-Petrisic *et al.* (2006), *Alzheimer-like changes in protein kinase B and glycogen synthase kinase-3 in rat frontal cortex and hippocampus after damage to the insulin signalling pathway*; J. Neurochem., **96** 1005
- 5) Lane *et al.* (2000), *5-thio=D-glucose elevates renal transforming growth factor beta-1 at a dose that does not prevent streptozotocin diabetes in rats*; Am. Endocrinology, **141** 3337

PHYSICAL DATA

Molecular Weight:	196.22
Molecular Formula:	C ₆ H ₁₂ O ₅ S
Purity:	97% by HPLC NMR: (Conforms)
Solubility:	Water (up to 15 mg/ml)
Physical Description:	White solid
Storage and Stability:	Store as supplied desiccated at room temperature for up to 2 years from the date of purchase. Solutions in distilled water may be stored at -20°C for up to 2 months.

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