

Estradiol 17-( $\beta$ -D-Glucuronide) (sodium salt hydrate)

## Chemical Properties

CAS No. :

Formula:

Molecular Weight:

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Actual storage temperature shall be subject to the COA.

## Biological Description

Description	Estradiol 17-( $\beta$ -D-glucuronide) (E217G) is an estrogen metabolite formed in the liver and subsequently excreted in bile. It acts as a substrate of the multidrug resistance protein 2 (MRP2; $K_m = 75 \mu\text{M}$ ), and through MRP2-mediated transport, functions as a cholestatic agent, decreasing bile flow. In addition to binding to the MRP2 transport site, E217G has been shown to bind to an allosteric site that through positive cooperativity activates its own transport via MRP2 and the transport of other MRP2 substrates, including the non-cholestatic estrogen metabolite, estradiol 3-( $\beta$ -D-glucuronide). E217G has also been reported to be transported by MDR1, MRP1, MRP3, MRP4, MRP7, ABCG2 (a breast cancer resistance protein transporter), and the rat organic anion-transporting polypeptides 1-4.
Targets (IC50)	Others

## Solubility Information

Solubility	DMSO:PBS (pH 7.2) (1:1): 0.5 mg/mL, Sonication is recommended. DMF: 10 mg/mL, Sonication is recommended. DMSO: 20 mg/mL, Sonication is recommended. ( $< 1 \text{ mg/ml}$ refers to the product slightly soluble or insoluble)
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## Reference

- Loe, D.W., Almquist, K.C., Cole, S.P., et al. ATP-dependent 17 $\beta$ -estradiol 17-( $\beta$ -D-glucuronide) transport by multidrug resistance protein (MRP). Inhibition by cholestatic steroids *The Journal of Biological Chemistry* 271(16) 9683-9689(1996)
- Gerk, P.M., Li, W., and Vore, M. Estradiol 3-glucuronide is transported by the multidrug resistance-associated protein 2 but does not activate the allosteric site bound by estradiol 17-glucuronide *Drug Metabolism and Disposition* 32(10)1139-1145(2004)
- Gerk, P.M., Li, W., Megaraj, W., et al. Human multidrug resistance protein 2 transports the therapeutic bile salt tauroursodeoxycholate *Journal of Pharmacology and Experimental Therapeutics* 320(2)893-899(2007)

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