

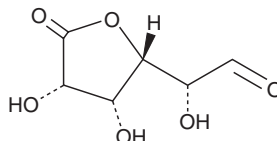
# PRODUCT INFORMATION



## D-Glucurone

Item No. 40301

CAS Registry No.: 32449-92-6  
Formal Name: D-glucuronic acid,  $\gamma$ -lactone  
Synonyms: D-Glucuronolactone, NSC 656  
MF:  $C_6H_8O_6$   
FW: 176.1  
Purity:  $\geq 98\%$   
Supplied as: A solid  
Storage:  $-20^\circ\text{C}$   
Stability:  $\geq 4$  years



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

### Laboratory Procedures

D-Glucurone is supplied as a solid. A stock solution may be made by dissolving the D-glucurone in the solvent of choice, which should be purged with an inert gas. D-Glucurone is slightly soluble in acetonitrile. It is also soluble in water. We do not recommend storing the aqueous solution for more than one day.

### Description

D-Glucurone is an intermediate in the glucuronic acid pathway.<sup>1,2</sup> It is formed from D-glucuronic acid (Item No. 31531) spontaneously or by uronolactonase and is converted to L-ascorbic acid (Item No. 14656) via a L-gulonolactone intermediate. D-Glucurone (1  $\mu\text{g}/\text{ml}$ ) prevents increases in alanine transaminase (ALT) and aspartate aminotransferase (AST) activities, as well as malondialdehyde (MDA) levels, and protects against decreases in cell viability, superoxide dismutase (SOD) activity, and glutathione (GSH) levels, induced by the mycotoxin ochratoxin A (Item No. 11439) in primary chicken hepatocytes.<sup>3</sup> *In vivo*, D-glucurone (1 mg/ml in the tank water) prevents decreases in neuronal excitability and reverses deficits in a visual avoidance assay in a *Xenopus* model of neurotoxicity induced by the solvent *p*-xylene.<sup>4</sup>

### References

1. Horio, F., Kimura, M., and Yoshida, A. Effect of several xenobiotics on the activities of enzymes affecting ascorbic acid synthesis in rats. *J. Nutr. Sci. Vitaminol. (Tokyo)* **29**(3), 233-247 (1983).
2. Sauer, M., Branduardi, P., Valli, M., et al. Production of L-ascorbic acid by metabolically engineered *Saccharomyces cerevisiae* and *Zygosaccharomyces bailii*. *Appl. Environ. Microbiol.* **70**(10), 6086-6091 (2004).
3. Yu, Z., Wu, F., Tian, J., et al. Protective effects of compound ammonium glycyrrhizin, L-arginine, silymarin and glucurone against liver damage induced by ochratoxin A in primary chicken hepatocytes. *Mol. Med. Rep.* **18**(3), 2551-2560 (2018).
4. Liao, Y., Luo, Y., Ding, N., et al. D-Glucuronolactone attenuates para-xylene-induced defects in neuronal development and plasticity in *Xenopus* tectum *in vivo*. *Toxicology* **430**, 152341 (2020).

#### 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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