

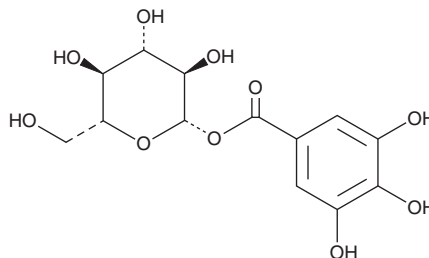
# PRODUCT INFORMATION



## β-Glucogallin

Item No. 36010

<b>CAS Registry No.:</b>	13405-60-2
<b>Formal Name:</b>	1-(3,4,5-trihydroxybenzoate) β-D-glucopyranose
<b>Synonym:</b>	1-O-Galloyl-β-D-glucose
<b>MF:</b>	C <sub>13</sub> H <sub>16</sub> O <sub>10</sub>
<b>FW:</b>	332.3
<b>Purity:</b>	≥98%
<b>UV/Vis.:</b>	λ <sub>max</sub> : 218, 281 nm
<b>Supplied as:</b>	A solid
<b>Storage:</b>	-20°C
<b>Stability:</b>	≥4 years
<b>Item Origin:</b>	Synthetic



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

### Laboratory Procedures

β-Glucogallin is supplied as a solid. A stock solution may be made by dissolving the β-glucogallin in the solvent of choice, which should be purged with an inert gas. β-Glucogallin is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of β-glucogallin in these solvents is approximately 12 and 14 mg/ml, respectively.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of β-glucogallin can be prepared by directly dissolving the solid in aqueous buffers. The solubility of β-glucogallin in PBS (pH 7.2) is approximately 0.3 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

β-Glucogallin is a plant metabolite that has been found in *E. officinalis* and an aldose reductase 2 inhibitor (IC<sub>50</sub> = 17 μM).<sup>1</sup> β-Glucogallin (30 μM) inhibits glucose-induced sorbitol accumulation in lenses isolated from a transgenic mouse model overexpressing *AKR1B1*, the gene encoding human aldose reductase 2. It also reduces methylglyoxal-induced increases in COX-2, IL-6, IL-8, chemokine (C-C motif) ligand 2 (CCL2), and receptor for advanced glycation end products (RAGE) levels in ARPE-19 retinal epithelial cells.<sup>2</sup>

### References

1. Puppala, M., Ponder, J., Suryanarayana, P., *et al.* The isolation and characterization of β-glucogallin as a novel aldose reductase inhibitor from *Emblca officinalis*. *PLoS One* **7(4)**, e31399 (2012).
2. Ma, Y., Liu, F., and Xu, Y. Protective effect of β-glucogallin on damaged cataract against methylglyoxal induced oxidative stress in cultured lens epithelial cells. *Med. Sci. Monit.* **25**, 9310-9318 (2019).

#### 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.

#### WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 10/13/2022

#### CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA

**PHONE:** [800] 364-9897

[734] 971-3335

**FAX:** [734] 971-3640

CUSTSERV@CAYMANCHEM.COM  
WWW.CAYMANCHEM.COM