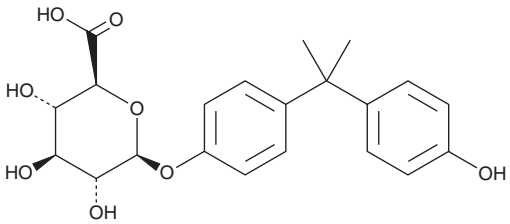
PRODUCT INFORMATION

Bisphenol A-β-D-Glucuronide

Item No. 35857

CAS Registry No.: 267244-08-6
Formal Name: β-D-glucopyranosiduronic acid, 4-[1-(4-hydroxyphenyl)-1-methylethyl]phenyl
Synonyms: BPA-glucuronide, BPA-β-D-glucuronide, BPA-monoglucuronide, BPAG
MF: $C_{21}H_{24}O_8$
FW: 404.4
Purity: ≥95%
Supplied as: A solution in methanol
Storage: -20°C
Stability: ≥4 years



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

Description

Bisphenol A-β-D-glucuronide (BPA-glucuronide) is an inactive metabolite of the plasticizer BPA.[1,2] It is formed from BPA primarily by the UDP-glucuronosyltransferase (UGT) isoform UGT2B15.[3] Unlike BPA, BPA-glucuronide does not bind to estrogen receptors (ERs) in cell-free assays or induce ER-mediated transcription in a reporter assay using MCF-7 cells.[4] BPA-glucuronide blood levels are lower in patients with Parkinson's disease compared to individuals without Parkinson's disease with the same blood levels of total BPA, which includes BPA and BPA-glucuronide.[5]

References

1. Völkel, W., Bittner, N., and Dekant, W. Quantitation of bisphenol A and bisphenol A glucuronide in biological samples by high performance liquid chromatography-tandem mass spectrometry. *Drug Metab. Dispos.* **33(11)**, 1748-1757 (2005).
2. Stein, T.P., Schluter, M.D., Steer, R.A., *et al.* Bisphenol-A and phthalate metabolism in children with neurodevelopmental disorders. *PLoS One* **18(9)**, e0289841 (2023).
3. Hanioka, N., Naito, T., and Narimatsu, S. Human UDP-glucuronosyltransferase isoforms involved in bisphenol A glucuronidation. *Chemosphere* **74(1)**, 33-36 (2008).
4. Matthews, J.B., Twomey, K., and Zacharewski, T.R. In vitro and in vivo interactions of bisphenol A and its metabolite, bisphenol A glucuronide, with estrogen receptors α and β. *Chem. Res. Toxicol.* **14(2)**, 149-157 (2001).
5. Landolfi, A., Troisi, J., Savanelli, M.C., *et al.* Bisphenol A glucuronidation in patients with Parkinson's disease. *Neurotoxicology* **63**, 90-96 (2017).

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