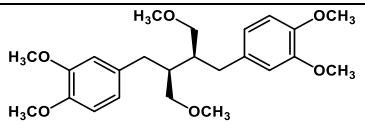
Phyllanthin

Name of the Phytochemical	**Phyllanthin**
Chemical Structure	
Botanical Source	Phyllanthus amarus
CAS Number	10351-88-9
Functional Activity	• Exhibits anti oxidant and hepatoprotective activity • An effective oral anticancer agent • Induces apoptosis in MOLT-4 leukemia cancer cells • Exerts anti-fibrotic effects • It has anti-inflammatory and antibacterial properties
Key References	1. The promising antioxidant effects of lignans: Nrf2 activation comes into view. Naunyn Schmiedebergs. **Arch Pharmacol., 2024, 397, 6439-6458** 2. Mechanism of protective effect of phyllanthin against carbon tetrachloride-induced hepatotoxicity and experimental liver fibrosis in mice. **Toxicol Mech Methods, 2015, 25, 708-17** 3. Phyllanthin inhibits MOLT-4 leukemic cancer cell growth and induces apoptosis through the inhibition of AKT and JNK signaling pathway. **J Biochem Mol Toxicol., 2021, 35, 1-10** 4. Phyllanthin from Phyllanthus amarus inhibits LPS-induced proinflammatory responses in U937 macrophages via downregulation of NF-κB/MAPK/PI3K-Akt signaling pathways. **Phytother Res., 2018, 32, 2510-2519** 5. Phyllanthin prevents diethylnitrosamine (DEN) induced liver carcinogenesis in rats and induces apoptotic cell death in HepG2 cells. **Biomed Pharmacother., 2021, 137, 111335**

6. Phyllanthin from Phyllanthus amarus inhibits cellular and humoral immune responses in Balb/C mice. **Phytomedicine, 2016, 23, 1441-1450**
7. Phyllanthin and hypophyllanthin, the isolated compounds of Phyllanthus niruri inhibit protein receptor of corona virus (COVID-19) through in silico approach. J Basic **Clin Physiol Pharmacol., 2021, 32, 809-815**
8. Isolation, characterization and antioxidative effect of phyllanthin against CCl4-induced toxicity in HepG2 cell line. **Chem. Biol. Interact., 2009, 181, 351-358**
9. Phyllanthin from Phyllanthus amarus inhibits cellular and humoral immune responses in Balb/C mice. **Phytomedicine, 2016, 23, 144-1450**
10. Protective effects of phyllanthin, a lignan from *Phyllanthus amarus*, against progression of high fat diet induced metabolic disturbances in mice. RSC Advances, 2016, 63
11. Hypophyllanthin and Phyllanthin from Phyllanthus niruri Synergize Doxorubicin Anticancer Properties against Resistant Breast Cancer Cells. ACS Omega, 2023, 8, 31, 28563–28576
12. Phyllanthin from Phyllanthus amarus inhibits LPS-induced proinflammatory responses in U937 macrophages via downregulation of NF-κB/MAPK/PI3K-Akt signaling pathways. Phytother Res, 2018, 32, 2510-2519