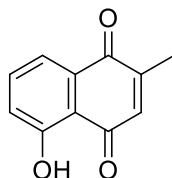


Plumbagin

Code No.: **BIA-P2586**

Pack sizes: **5 mg, 25 mg**



Synonyms : 2-Methyljuglone, NSC 236613, NSC 688284, Plumbagine, Plumbagone

Specifications

CAS #	: 481-42-5
Molecular Formula	: C ₁₁ H ₈ O ₃
Molecular Weight	: 188.18
Source	: <i>Plumbagin indica</i>
Appearance	: Orange solid
Purity	: >95% by HPLC
Long Term Storage	: -20°C
Solubility	: Soluble in methanol or DMSO

Application Notes

Plumbagin is a yellow-orange pigment isolated from Plumbagin and other plant species. Research into plumbagin dates back to the early 1800s, with its synthesis first being reported in 1936. Plumbagin has a broad biological activity, including bactericidal, fungicidal, tuberculostatic, larvicidal, nematocidal, ichthyotoxic, antiinflammatory and seed germination inhibitory activity, as well as weak insect antifeedant activity. Plumbagin's activity is attributed to its effects on multiple signaling and apoptotic pathways, and its ability to undergo redox cycling property generating ROS. Plumbagin induces quinone reductase and glutathione transferase and is a potent inhibitor of NF-κB.

References

1. Synthesis of plumbagin. Fieser L.F. & Dunn J.T. J Am Chem Soc. 1936, 58, 572.
2. Bioactive naphthoquinone derivatives from *Diospyros maritima* BLUME. Higa M. et al. Chem Pharm Bull. 1998, 46, 1189.
3. Perspectives on medicinal properties of plumbagin and its analogs. Padhye S. et al. Med Res Rev. 2012, 32, 1131.
4. Plumbagin (5-hydroxy-2-methyl-1,4-naphthoquinone) suppresses NF-kappaB activation and NF-kappaB-regulated gene products through modulation of p65 and Ikbppalpha kinase activation, leading to potentiation of apoptosis induced by cytokine and chemotherapeutic agents. Sandur S.K. et al. J Biol Chem. 2006, 281, 17023.
5. Induction of quinone reductase and glutathione transferase in rat tissues by juglone and plumbagin. Munday R. & Munday C.M. Planta Med 2000, 66, 399.