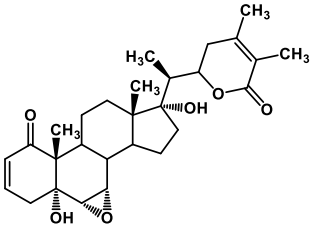
Withanone

Name of the Phytochemical	**Withanone**
Chemical Structure	
Botanical Source	Withania somnifera
CAS Number	27570-38-3
Functional Activity	• Withanone combined with Cucurbitacin B has selective toxicity to cancer cells • It is a potential candidate molecule in cancer therapy. • serve as potential neuroprotective agent • shows promise in Alzheimer's disease treatment because of cognitive benefits • significantly enhanced the acetyl choline and Glutathione (GSH) activity
Key References	1. Induction of Senescence in Cancer Cells by a Novel Combination of Cucurbitacin B and Withanone: Molecular Mechanism and Therapeutic Potential. **J Gerontol A Biol Sci Med Sci,. 2020, 75, 1031-1041** 2. Anti-Stress and Glial Differentiation Effects of a Novel Combination of Cucurbitacin B and Withanone (CucWi-N): Experimental Evidence. **Ann Neurosci. 2018, 25, 201-209** 3. Understanding ligands driven mechanism of wild and mutant aryl hydrocarbon receptor in presence of phytochemicals combating Parkinson's disease: an in silico and in vivo study**. J Biomol Struct Dyn, . 2020, 38, 807-826** 4. Wild type p53 function in p53(Y220C) mutant harboring cells by treatment with Ashwagandha derived anticancer withanolides: bioinformatics and experimental evidence. **J Exp Clin Cancer Res. 2019, 38, 103** 5. Structural bioinformatics-based identification of putative plant based lead compounds for Alzheimer Disease Therapy. **Comput Biol Chem. 2019, 78, 359-366**

6. Multifunctional neuroprotective effect of Withanone, a compound from Withania somnifera roots in alleviating cognitive dysfunction. **Cytokine. 2018, 102, 211-221**
7. Withanolides against TLR4-Activated Innate Inflammatory Signalling Pathways: A Comparative Computational and Experimental Study. **Phytother Res. 2017, 31, 152-163**
8. Aqueous extract from the Withania somnifera leaves as a potential anti-neuroinflammatory agent: a mechanistic study. **J Neuroinflammation. 2016, 13, 193**
9. Withanone, an Active Constituent from Withania somnifera, Affords Protection Against NMDA-Induced Excitotoxicity in Neuron-Like Cells. **Mol Neurobiol. 2017, 54, 5061-5073**
10. Withania somnifera aqueous extract facilitates the expression and release of GnRH: In vitro and in vivo study. **Neurochem Int. 2015, 89, 111-119**
11. Deceleration of Senescence in Normal Human Fibroblasts by Withanone Extracted From Ashwagandha Leaves. *The Journals of Gerontology: Series A*, 2009, 64A, 1031–1038
12. Composition for lifetime extension of normal cell containing withanone which is ingredient of leaf extract of withania somnifera. JP 2008 195704A