



LKT Laboratories, Inc.

## Esculetin

Phone: 888-558-5227  
651-644-8424  
Fax: 888-558-7329  
Email: [getinfo@lktlabs.com](mailto:getinfo@lktlabs.com)  
Web: [lktlabs.com](http://lktlabs.com)

### Product Information

**Product ID** E7309

**CAS No.** 305-01-1

**Chemical Name** 6,7-Dihydroxy-2H-1-benzopyran-2-one

**Synonym** 6,7-Dihydroxycoumarin, Cichorigenin

**Formula** C<sub>9</sub>H<sub>6</sub>O<sub>4</sub>

**Formula Wt.** 178.14

**Melting Point** 268-270°C

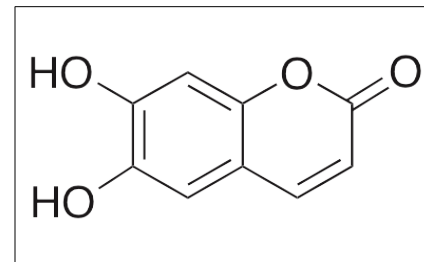
**Purity** ≥99%

**Solubility** Soluble in dil alkalies, hot alcohol or glacial acetic acid. Insoluble in ether or boiling water.

**Store Temp** Ambient

**Ship Temp** Ambient

**Description** Esculetin is a coumarin lactone found in chicory and other plants; it exhibits anticoagulant, anti-obesity, anti-hyperlipidemic, anti-inflammatory, anticancer, antioxidative, and neuroprotective activities. Esculetin decreases levels of NO, PPAR $\gamma$ , TNF- $\alpha$ , and MCP-1 and increases levels of heme oxygenase 1 (HO-1) in macrophages. In animal models of Parkinson's disease, esculetin inhibits MPTP-induced neurotoxicity and neuronal apoptosis. In high fat diet-fed rats, this compound decreases body weight, triglyceride levels, total cholesterol, and glucose levels. Additionally, esculetin induces cell cycle arrest, DNA fragmentation, activation of caspases 3 and 9, reduction of the mitochondrial membrane potential, and apoptosis in acute promyelocytic leukemia (APL) cells. Esculetin also inhibits proliferation of colon cancer cells by directly inhibiting  $\beta$ -catenin. This compound also acts as a radical scavenger in vitro.



**Bulk quantities available upon request**

| Product ID | Size   |
|------------|--------|
| E7309      | 500 mg |
| E7309      | 1 g    |

**References** Kim Y, Park Y, Namkoong S, et al. Esculetin inhibits the inflammatory response by inducing heme oxygenase-1 in cocultured macrophages and adipocytes. *Food Funct.* 2014 Aug 20;5(9):2371-7. PMID: 25088305.

Rubio V, Calviño E, García-Pérez A, et al. Human acute promyelocytic leukemia NB4 cells are sensitive to esculetin through induction of an apoptotic mechanism. *Chem Biol Interact.* 2014 Jul 1;220C:129-139. PMID: 24995577.

Medina ME, Galano A, Alvarez-Idaboy JR. Theoretical study on the peroxy radicals scavenging activity of esculetin and its regeneration in aqueous solution. *Phys Chem Chem Phys.* 2014 Jan 21;16(3):1197-207. PMID: 24292723.

Lee SY, Lim TG, Chen H, et al. Esculetin suppresses proliferation of human colon cancer cells by directly targeting  $\beta$ -catenin. *Cancer Prev Res (Phila).* 2013 Dec;6(12):1356-64. PMID: 24104353.

Karmase A, Birari R, Bhutani KK. Evaluation of anti-obesity effect of Aegle marmelos leaves. *Phytomedicine.* 2013 Jul 15;20(10):805-12. PMID: 23632084.

Subramaniam SR, Ellis EM. Neuroprotective effects of umbelliferone and esculetin in a mouse model of Parkinson's disease. *J Neurosci Res.* 2013 Mar;91(3):453-61. PMID: 23184853.

**Caution:** This product is intended for laboratory and research use only. It is not for human or drug use.