



LKT Laboratories, Inc.

Esculin

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Product Information

Product ID E7310

CAS No. 531-75-9

Chemical Name 6-(β-D-Glucopyranosyloxy)-7-hydroxy-2H-1-benzopyran-2-one

Synonym Esculin hydrate, Esculoside, Bicolorin, Enallachrome, Polychrome, Escosyl

Formula $C_{15}H_{16}O_9 \cdot H_2O$

Formula Wt. 358.30

Melting Point 203-205°C

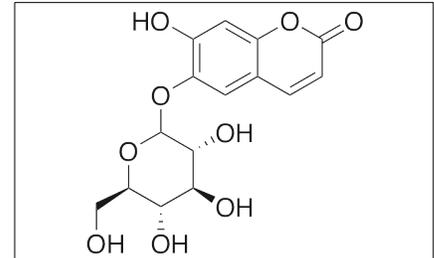
Purity ≥98%

Solubility Slightly soluble in water.
Soluble in methanol, DMSO
(60 mg/mL).

Store Temp Ambient

Ship Temp Ambient

Description Esculin is a coumarin glucoside found in *Aesculus*, *Daphne*, and *Bursaria*. Esculin exhibits anti-diabetic and antioxidative activities. Esculin is hydrolyzed by species of *Streptococcus*, *Enterococcus*, *Listeria*, and *Aerococcus* and is used in research models to identify these bacteria. In diabetic rats, esculin decreases blood glucose and glucose-6-phosphatase levels and increases glucose uptake, potentially through the activation of insulin receptors, Akt, and GSK3β. Additionally, esculin decreases lipid peroxidation and increases levels of glutathione, glutathione peroxidase, glutathione-S-transferase, superoxide dismutase, and catalase in the kidneys of animals treated with pro-oxidant aflatoxin B1.



Bulk quantities available upon request

| Product ID | Size |
|------------|------|
| E7310 | 1 g |
| E7310 | 5 g |
| E7310 | 10 g |

References Kang KS, Lee W, Jung Y, et al. Protective effect of esculin on streptozotocin-induced diabetic renal damage in mice. *J Agric Food Chem.* 2014 Mar 5;62(9):2069-76. PMID: 24484395.

Naaz F, Abdin MZ, Javed S. Protective effect of esculin against prooxidant aflatoxin B1-induced nephrotoxicity in mice. *Mycotoxin Res.* 2014 Feb;30(1):25-32. PMID: 24326591.

Raemy A, Meylan M, Casati S, et al. Phenotypic and genotypic identification of streptococci and related bacteria isolated from bovine intramammary infections. *Acta Vet Scand.* 2013 Jul 18;55:53. PMID: 23866930.

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