

## 2'-Hydroxydaidzein

**Chemical Properties**

CAS No.:	7678-85-5
Formula:	C <sub>15</sub> H <sub>10</sub> O <sub>5</sub>
Molecular Weight:	270.24
Appearance:	N/A
Storage:	0-4°C for short term (days to weeks), or -20°C for long term (months).

**Biological Description**

Description	2'-Hydroxygenistein is an isoflavonoid phytoalexin, it suppresses chemical mediators in inflammatory cells, may have value in treatment and prevention of central and peripheral inflammatory diseases associated with excess production of chemical mediators. 2'-Hydroxygenistein shows significant concentration-dependent inhibitory effects on the release of beta-glucuronidase and lysozyme from rat neutrophils in response to formyl-Met-Leu-Phe/cytochalasin B (fMLP/CB) with IC <sub>50</sub> values of 2.8+/-0.1 and 5.9+/-1.4 microM, respectively.
Targets(IC <sub>50</sub> )	Immunology & Inflammation related: None NADPH-oxidase: None
In vitro	<b>METHODS AND RESULTS:</b> An NADPH:2'-Hydroxydaidzein oxidoreductase (HDR) from elicitor-challenged soybean cell cultures was purified to apparent homogeneity by a five-step procedure. The purification procedure included affinity adsorption on Blue Sepharose and elution of the enzyme with NADP <sup>+</sup> . It was shown by gel filtration and by sodium dodecyl sulfate-polyacrylamide gel electrophoresis that HDR consists of only one polypeptide, which has a Mr about 34,700. The pH optimum of the reaction was 7.0. Apparent Michaelis constants determined for 2'-Hydroxydaidzein, 2'-hydroxyformononetin, and NADPH were, respectively, 50, 60, and 56 microM. A low conversion of 2'-hydroxygenistein to the corresponding isoflavanone was also observed but isoflavones lacking a 2'-hydroxyl group and various other flavonoids did not serve as substrates. <b>CONCLUSIONS:</b> Enzymatically derived 2'-hydroxydihydrodaidzein gave a positive CD spectrum at 328 nm, which shows its 3R stereochemistry. Antibodies against HDR were raised in rats.

**Solubility Information**

Solubility	< 1 mg/ml refers to the product slightly soluble or insoluble
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## Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.700 mL	18.502 mL	37.004 mL
5 mM	0.740 mL	3.700 mL	7.401 mL
10 mM	0.370 mL	1.850 mL	3.700 mL
50 mM	0.074 mL	0.370 mL	0.740 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. The storage conditions and period of the stock solution: - 80 °C for 6 months; - 20 °C for 1 month. Please use it as soon as possible.

## Reference

1. Phytoalexin synthesis in soybean: purification and characterization of NADPH:2'-hydroxydaidzein oxidoreductase from elicitor-challenged soybean cell cultures. Arch Biochem Biophys. 1990 Feb 1;276(2):390-5.
2. Anti-inflammatory flavonoids and pterocarpanoid from *Crotalaria pallida* and *C. assamica*. Bioorg. Med. Chem. Lett., 2004, 14(22):1011-4.

## Inhibitors · Natural Compounds · Compound Libraries

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