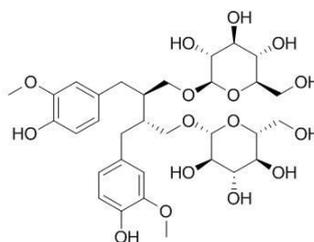


## Secoisolariciresinol Diglucoside Datasheet

4<sup>th</sup> Edition (Revised in July, 2016)**[ Product Information ]****Name:** Secoisolariciresinol Diglucoside**Catalog No.:** CFN99722**Cas No.:** 148244-82-0**Purity:** >=98%**M.F:** C<sub>32</sub>H<sub>46</sub>O<sub>16</sub>**M.W:** 686.71**Physical Description:** Powder**Synonyms:** 2,3-Bis(3-methoxy-4-hydroxybenzyl)butane-1,4-diol 1,4-diglucoside.**[ Intended Use ]**

1. Reference standards;
2. Pharmacological research;
3. Food research;
4. Cosmetic research;
5. Synthetic precursor compounds;
6. Intermediates & Fine Chemicals;
7. Others.

**[ Source ]**The seeds of *Linum usitatissimum* L.

## **[ Biological Activity or Inhibitors ]**

Secoisolariciresinol diglucoside (SDG) is a plant lignan isolated from flaxseed, SDG is an antioxidant, SDG can reduce hypercholesterolemic atherosclerosis and that this effect is associated with a decrease in serum cholesterol, LDL-C, and lipid peroxidation product and an increase in HDL-C and antioxidant reserve.<sup>[1]</sup>

Secoisolariciresinol diglucoside can prevent type 1 and type 2 diabetes in a rat model, the mechanism may be due to oxidative stress, SDG is effective in retarding the development of diabetes.<sup>[2]</sup>

Secoisolariciresinol diglucoside can induce neovascularization-mediated cardioprotection against ischemia-reperfusion injury in hypercholesterolemic myocardium, SDG treatment reduces ventricular remodeling by neovascularization of the infarcted HC myocardium. <sup>[3]</sup>

Secoisolariciresinol diglucoside is a phytoestrogen, estrogens and phytoestrogen from soy have been reported to have mild hypotensive effects, and SDG is a long-acting hypotensive agent, and that the hypotensive effect is mediated through the guanylate cyclase enzyme.<sup>[4]</sup>

Secoisolariciresinol diglycoside is a dietary supplementation, it can reduce pulmonary metastasis of melanoma cells and inhibit the growth of metastatic tumors that formed in the lungs, concluded that dietary supplementation with SDG reduces experimental metastasis of melanoma cells in mice.<sup>[5]</sup>

Chronic secoisolariciresinol diglycoside treatment can correct neuropathic hyperalgesia and allodynia in mice with type 1 diabetes, mechanistically, the analgesic actions of SDG in diabetic mice may be associated with its antioxidant activity.<sup>[6]</sup>

Secoisolariciresinol diglycoside has an antitumor effect when provided at the early promotion stage of tumorigenesis and may contribute to the health benefits of high-fiber foods.<sup>[7]</sup>

## **[ Solvent ]**

Pyridine, Methanol, Ethanol, etc.

## **[ HPLC Method ]<sup>[8]</sup>**

Mobile phase: Acetonitrile - 1% Aqueous acetic acid =15:85 ;

Flow rate: 1.0 ml/min;

Column temperature: 30 °C;

The wave length of determination: 280 nm.

## **[ Storage ]**

2-8°C, Protected from air and light, refrigerate or freeze.

## **[ References ]**

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[4] Prasad K. *Int.J. Angiol.*, 2004, 13(1):7-14.

[5] Li D, Yee J A, Thompson L U, et al. *Cancer Lett.*, 1999, 142(1):91-6.

[6] Hu P, Mei Q Y, Ma L, et al. *Eur. J. Pharmacol.*, 2015, 767:183-92.

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[8] Liu X. *J. Liq. Chromatogr. R. T.*, 2007, 30(4):533-44.

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