



Product Information

Product ID F5770

CAS No. 485-72-3

Chemical Name 7-Hydroxy-3-(4-methoxyphenyl)-4H-1-benzopyran-4-one

Synonym Biochanin B, Formononetol, Neochanin

Formula $C_{16}H_{12}O_4$

Formula Wt. 268.26

Melting Point 258° C

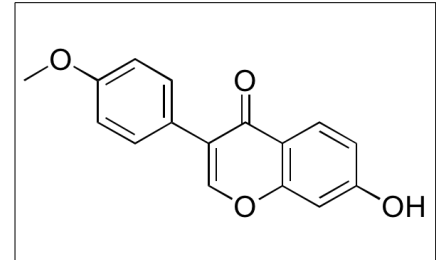
Purity ≥90%

Solubility Soluble in DMSO
(200mg/mL) or methanol
(2mg/mL).

Store Temp Ambient

Ship Temp Ambient

Description Formononetin is a phytoestrogen and isoflavone originally found in legumes in the *Fabaceae* family. Formononetin exhibits anti-inflammatory, antioxidative, anticancer, antihypertensive, anti-parasitic, anti-osteoporotic, and pro-angiogenic activities. Formononetin decreases expression of COX-2, malondialdehyde, TNF- α , and IL-6 and increases activity of superoxide dismutase and glutathione peroxidase in animal models of traumatic brain injury. In prostate cancer cells, formononetin increases expression of Bax and suppresses expression of IGF-1R, inducing apoptosis and inhibiting proliferation. In spontaneously hypertensive rats, formononetin decreases systolic blood pressure, increases expression of eNOS, and decreases expression of 5-HT receptors and α 1-adrenergic receptors. Additionally, formononetin inhibits attachment and motility of *Giardia*. This compound also induces mesenchymal stem cell differentiation, increases expression of VEGF and VEGFR2, and promotes bone fracture healing.



Bulk quantities available upon request

Product ID	Size
F5770	100 mg
F5770	500 mg
F5770	1 g

References Li Z, Dong X, Zhang J, et al. Formononetin protects TBI rats against neurological lesions and the underlying mechanism. *J Neurol Sci.* 2014 Mar 15;338(1-2):112-7. PMID: 24411660.

Huang WJ, Bi LY, Li ZZ, et al. Formononetin induces the mitochondrial apoptosis pathway in prostate cancer cells via downregulation of the IGF-1/IGF-1R signaling pathway. *Pharm Biol.* 2013 Dec 20. [Epub ahead of print]. PMID: 24359236.

Sun T, Wang J, Huang LH, et al. Antihypertensive effect of formononetin through regulating the expressions of eNOS, 5-HT2A/1B receptors and α 1-adrenoceptors in spontaneously rat arteries. *Eur J Pharmacol.* 2013 Jan 15;699(1-3):241-9. PMID: 23123056.

Lauwaet T, Andersen Y, Van de Ven L, et al. Rapid detachment of *Giardia lamblia* trophozoites as a mechanism of antimicrobial action of the isoflavone formononetin. *J Antimicrob Chemother.* 2010 Mar;65(3):531-4. PMID: 20067984.

Huh JE, Kwon NH, Baek YH, et al. Formononetin promotes early fracture healing through stimulating angiogenesis by up-regulating VEGFR-2/Flk-1 in a rat fracture model. *Int Immunopharmacol.* 2009 Nov;9(12):1357-65. PMID: 19695348.

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