

Product Data Sheet

Product Name: Genkwanin

Cat. No.: GN10160

Chemical Properties

Cas. No. 437-64-9

Chemical Name 5-hydroxy-2-(4-hydroxyphenyl)-7-methoxychromen-4-one

SMILES COC1=CC(=C2C(=C1)OC(=CC2=O)C3=CC=C(C=C3)O)O

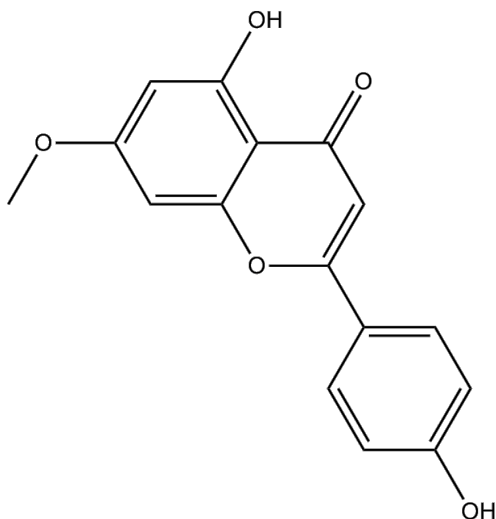
Formula $C_{16}H_{12}O_5$ M.Wt 284.26

Solubility DMSO : 31.25 mg/mL (109.93 mM; Need ultrasonic) Storage 4°C, protect from light

General tips For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.

Structure



Protocol

Cell experiment [1]:

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

Product Data Sheet

Cell lines	RAW264.7 macrophages
Preparation Method	RAW264.7 macrophages were pretreated with Genkwanin for 2h and then stimulated with LPS (10ng/mL) for 24h. TNF- α , IL-1 β , IFN γ , and IL-6 in the cell supernatants were assayed using ELISA kits.
Reaction Conditions	0, 12.5, 25 and 50 μ M; 2h
Applications	Genkwanin suppressed the productions of TNF- α , IL-1 β and IL-6 in a concentration-dependent manner.
Animal experiment [2]:	
Animal models	Newborn Balb/c mice
Preparation Method	Mice were received HDM (house dust mite) nasal administration at 3 days of age, with 10 μ g of HDM thrice a week for 2 weeks and 15 μ g of HDM thrice a week for 4 weeks. Treatment with Genkwanin was initiated 30min before the first HDM stimulation via intraperitoneal injection at doses of 20mg/kg and repeated every day until the endpoint. Apoptosis of airway epithelial cells in mouse lung tissues was analyzed using the TUNEL apoptosis detection kit.
Dosage form	20mg/kg; 6 weeks; i.p.
Applications	Genkwanin alleviated airway epithelial cell damage.

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

Product Data Sheet

References:

- [1] Gao Y, Liu F, Fang L, et al. Genkwanin inhibits proinflammatory mediators mainly through the regulation of miR-101/MKP-1/MAPK pathway in LPS-activated macrophages [J]. PloS one, 2014, 9(5): e96741.
- [2] Chen X, Liu J, An Z, et al. Genkwanin reduces airway epithelial cell ferroptosis and alleviates asthma symptoms in mice [J]. Phytomedicine, 2025, 148: 157306.

Background

Genkwanin is a non-glycosylated flavone and is found and extracted from plant matrices^[1]. Genkwanin possesses various biological activities, such as antioxidant, neuroprotective, anticancer, anti-bacterial and antidiabetic activities, it can effectively counteract pro-inflammatory mediators, including TNF- α , IL-1 β , IFN- γ , and IL-6 cytokines^[1,2].

Genkwanin (0, 12.5, 25 and 50 μ M; 2h) suppressed the productions of TNF- α , IL-1 β and IL-6 in lipopolysaccharide (LPS)-stimulated RAW264.7 macrophages in a concentration-dependent manner^[3]. Genkwanin (10 μ M; 72h) promoted CD8⁺ T cell proliferation^[4].

Genkwanin (20mg/kg; 6 weeks; i.p.) alleviated airway epithelial cell damage in newborn Balb/c mice with asthma^[5]. Genkwanin (10mg/kg; 7d; s.c.) protected LPS-induced osteoclast-mediated bone loss in C57BL/6 mice^[6].

References:

- [1] El Menyiy N, Aboulaghras S, Bakrim S, et al. Genkwanin: an emerging natural compound with multifaceted pharmacological effects [J]. Biomedicine & pharmacotherapy, 2023, 165: 115159.
- [2] Sun Y W, Bao Y, Yu H, et al. Anti-rheumatoid arthritis effects of flavonoids from Daphne genkwa [J]. International immunopharmacology, 2020, 83: 106384.
- [3] Gao Y, Liu F, Fang L, et al. Genkwanin inhibits proinflammatory mediators mainly through the regulation of miR-101/MKP-1/MAPK pathway in LPS-activated macrophages [J]. PloS one, 2014, 9(5): e96741.

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

Product Data Sheet

[4] Zhang B, Fu D, Wang X, et al. Network-based analysis and experimental validation of identified natural compounds from Yincheng Wuling San for acute myeloid leukemia [J]. *Frontiers in pharmacology*, 2025, 16: 1591164.

[5] Chen X, Liu J, An Z, et al. Genkwanin reduces airway epithelial cell ferroptosis and alleviates asthma symptoms in mice [J]. *Phytomedicine*, 2025, 148: 157306.

[6] Fu X, Sun X, Zhang C, et al. Genkwanin prevents lipopolysaccharide-induced inflammatory bone destruction and ovariectomy-induced bone loss [J]. *Frontiers in nutrition*, 2022, 9: 921037.

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA