Product Data Sheet

Product Name: Hydroxysafflor yellow A
Cat. No.: GN10204

Chemical Properties

Cas. No.	78281-02-4
Chemical Name	(6E)-2,5-dihydroxy-6-[(E)-1-hydroxy-3-(4-hydroxyphenyl)prop-2-enylidene]-2,4-bis[(2S,3R,4R,5S,6R)-3,4,5-trihydroxy-6-(hydroxymethyl)oxan-2-yl]cyclohex-4-ene-1,3-dione
SMILES	C1=CC(=CC=C1C=CC(=C2C(=C(C(=O)C(C2=O)(C3C(C(C(C(O3)CO)O)O)O)O)C4C(C(C(C(O4)CO)O)O)O)O)O)O
Formula	$C_{27}H_{32}O_{16}$ M.Wt 612.53
Solubility	≥ 61mg/mL in Water, ≥ 61.3mg/mL in DMSO Storage 4°C, protect from light
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ 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	Hydroxysafflor yellow A

Background

Hydroxysafflor yellow A is a flavonoid derived and isolated from traditional Chinese medicine Carthamus tinctorius L., possesses anti-tumor activity. IC50 value:Target: in vitro: HYSA could inhibit LPS-induced VSMCs proliferation and migration, accompanied by the downregulated levels of several key pro-inflammatory cytokines, including TNF-α, IL-6, and IL-8. We further showed that HYSA inhibited LPS-induced upregulation of TLR-4 expression as well as the activation of Rac1/Akt pathway [1]. HSYA protected EC viability against LPS-induced injury ($P<0.05$). LPS-induced NF-κB p65 subunit DNA binding ($P<0.01$) and nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor -α (I-κB-α) phosphorylation was inhibited by HSYA. HSYA attenuated LPS triggered ICAM-1 and E-selectin mRNA levels elevation and phosphorylation of p38 MAPK or c-Jun N-terminal kinase MAPK [2]. HSYA inhibited the proliferation of 3T3-L1 preadipocytes and cell viability greatly decreased in a dose and time dependent manner. HSYA (1 mg/l)

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notably reduced the amount of intracellular lipid and triglyceride content in adipocytes by 21.3 % (2.13 ± 0.36 vs 2.71 ± 0.40, P < 0.01) and 22.6 % (1.33 ± 0.07 vs 1.72 ± 0.07, P < 0.01) on days 8 following the differentiation, respectively [3]. in vivo: HSYA treatment ameliorated serum biochemical indicators by reducing the levels of alanine aminotransferase (ALT), aspartate aminotransferase (AST), hyaluronan (HA), laminin (LN), and type III precollagen (III-C) in rats [4].

References:
[1]. Yang G, et al. Hydroxysafflor yellow A inhibits lipopolysaccharide-induced proliferation and migration of vascular smooth muscle cells via Toll-like receptor-4 pathway. Int J Clin Exp Med. 2015 Apr 15;8(4):5295-302.
[2]. Zhu HJ, et al. Hydroxysafflor yellow A (HYSA) inhibited the proliferation and differentiation of 3T3-L1 preadipocytes. Cytotechnology. 2015 Mar 7.
[3]. He Y, et al. Protective effects of hydroxysafflor yellow A (HSYA) on alcohol-induced liver injury in rats. J Physiol Biochem. 2015 Mar;71(1):69-78.
[4]. Jin M, et al. Hydroxysafflor yellow A attenuate lipopolysaccharide-induced endothelium inflammatory injury. Chin J Integr Med. 2015 May 27.

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