

## Safflower yellow

Cat. No.:	HY-N0938
CAS No.:	1401-20-3
Target:	Fluorescent Dye
Pathway:	Others
Storage:	4°C, protect from light * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)

## Safflower yellow

### SOLVENT & SOLUBILITY

In Vitro	DMSO : 20 mg/mL (Need ultrasonic)
In Vivo	<ol style="list-style-type: none"> <li>Add each solvent one by one: 10% DMSO &gt;&gt; 40% PEG300 &gt;&gt; 5% Tween-80 &gt;&gt; 45% saline Solubility: ≥ 2 mg/mL (Infinity mM); Clear solution</li> <li>Add each solvent one by one: 10% DMSO &gt;&gt; 90% (20% SBE-β-CD in saline) Solubility: ≥ 2 mg/mL (Infinity mM); Clear solution</li> </ol>

### BIOLOGICAL ACTIVITY

Description	Safflower yellow is extracted from the flowers of the plant safflower ( <i>Carthamus tinctorius</i> ) and as the traditional Chinese medicine it has been extensively used for the treatment of cardio cerebrovascular diseases.
In Vivo	<p>Safflower yellow (SY) is the safflower extract and is the one of traditional Chinese medicine. Safflower yellow can promote blood circulation, remove blood stasis, and thereby improve capillary circulation at the site of tissue injury. Safflower yellow is mixtures of a water-soluble chalcone component, in which both hydroxyl safflower yellow A (HSYA) and safflower yellow B (SYB) are the main components. Safflower injection excellently protects the heart by way of improving functions of cardiac contraction and dilation, increasing coronary blood flow, and strengthening the bcl-2 (anti apoptosis gene) protein expression. Safflower yellow alleviates the injured tendon adhesion and inflammatory reaction and promoted the repair of injured tendon<sup>[1]</sup>.</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>

### PROTOCOL

Animal Administration <sup>[1]</sup>	<p>Rabbits<sup>[1]</sup></p> <p>The adult male New Zealand rabbits (body weight 2.0-2.5 kg) are used. Twenty-four rabbits are randomly divided into three groups (per group): sham-operated control (Cont), spinal cord ischemia reperfusion, and treated with safflower yellow. The control group only execute anesthesia and surgical procedures, except for occluding the abdominal aorta. The group is intravenously injected with 2 mL/kg of a solution of 16% (wt/vol) Safflower yellow (1 mL, containing 1.6 mg Safflower yellow), followed by continuous infusion of a total of 5 mL/kg through the right femoral vein at the moment of reperfusion</p>
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beginning after 40 minutes of the abdominal aorta occlusion. The same volumes of 0.9% saline solution are administered in control and groups. Blood samples are obtained at the end of 0 hour, 4 hours, 12 hours, 24 hours, and 48 hours after reperfusion, and the plasma is separated and stored at -80°C for further analysis. All animals are sacrificed 48 hours after reperfusion and are rapidly perfused with 0.9% sodium chloride, and the L2-5 segments of the spinal cord are quickly removed. The L2-3 segment in each animal is used for western blot, and the other segment (L4-5) is immersed into 10% neutral formaldehyde for 2-3 days and is used for morphology analysis<sup>[1]</sup>.

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## CUSTOMER VALIDATION

- Biomed Pharmacother. 2018 Nov;107:1736-1743.

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## REFERENCES

[1]. Zhou D, et al. The effect of safflower yellow on spinal cord ischemia reperfusion injury in rabbits. Oxid Med Cell Longev. 2013;2013:692302.

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

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