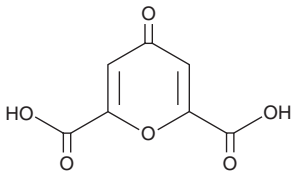
PRODUCT INFORMATION

Chelidonic Acid

Item No. 31324

CAS Registry No.:	99-32-1
Formal Name:	4-oxo-4H-pyran-2,6-dicarboxylic acid
Synonym:	NSC 3979
MF:	$C_7H_4O_6$
FW:	184.1
Purity:	≥95%
UV/Vis.:	λ_{max}: 220, 272 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years
Item Origin:	Synthetic



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Chelidonic acid is supplied as a crystalline solid. A stock solution may be made by dissolving the chelidonic acid in the solvent of choice, which should be purged with an inert gas. Chelidonic acid is soluble in the organic solvent DMSO at a concentration of approximately 1 mg/ml.

Chelidonic acid is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, chelidonic acid should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Chelidonic acid has a solubility of approximately 0.14 mg/ml in a 1:6 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Chelidonic acid is a pyran that has been found in *C. majus* and has diverse biological activities.[1-3] It inhibits rat brain glutamate decarboxylase (K_i = 1.2 µM).[2] Chelidonic acid (20 mg/kg per day) reduces serum IL-6 and TNF-α levels, colonic COX-2 and prostaglandin E_2 (PGE_2; Item No. 14010) levels, and the disease activity index score in a mouse model of ulcerative colitis induced by dextran sulfate sodium (DSS; Item No. 23250).[1] It inhibits ovalbumin challenge-induced decreases in spleen IFN-γ levels and increases in serum, spleen, and nasal mucosa IgE levels, spleen IL-4 levels, and nasal mucosa eosinophil and mast cell infiltration in a mouse model of ovalbumin-sensitized allergic rhinitis when administered at a dose of 2 mg/kg.[3]

References

1. Kim, D.-S., Kim, S.-J., Kim, M.-C., *et al.* The therapeutic effect of chelidonic acid on ulcerative colitis. *Biol. Pharm. Bull.* **35(5)**, 666-671 (2012).
2. Porter, T.G. and Martin, C.L. Chelidonic acid and other conformationally restricted substrate analogues as inhibitors of rat brain glutamate decarboxylase. *Biochem. Pharmacol.* **34(23)**, 4145-4150 (1985).
3. Oh, H.-A., Kim, H.-M., and Jeong, H.-J. Beneficial effects of chelidonic acid on a model of allergic rhinitis. *Int. Immunopharmacol.* **11(1)**, 39-45 (2011).

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