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Protective effects of silymarin against free radical-induced erythrocyte lysis

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Abstract

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The oxidative hemolysis of rat erythrocytes induced by 2,2'-azobis-(2-amidinopropane) (AAPH) and its inhibition by silymarin studied. Different concentrations of silymarin showed no significant hemolysis compared with phosphate buffer solution. AAPH (25 mM and 50 mM) induced hemolysis in a time-dependent manner. Silymarin inhibited AAPH (25 mM)-induced hemolysis concentration-dependently. However, in the presence of 50 mM of AAPH, only the two higher concentrations of silymarin inhibited hemolysis. Addition of silymarin 3h after incubation with AAPH (25 mM), had no significant effects on the time course of cell lysis. It is concluded that, in addition to its well-established antioxidant effects, silymarin displays cytoprotective properties. Copyright © 2006 The Berkeley Electronic Press. All rights reserved.

Reaxys Database Information

Author keywords

AAPH; Hemolysis; Silymarin

Indexed keywords

EMTREE drug terms: 2,2' azobis(2 amidinopropane); free radical; phosphate; silymarin

EMTREE medical terms: animal cell; antioxidant activity; article; cell damage; cell protection; concentration response; controlled study; dose time effect relation; hemolysis; incubation time; lipid peroxidation; male; nonhuman; oxidative stress; rat; rat strain

Chemicals and CAS Registry Numbers: 2,2' azobis(2 amidinopropane), 13217-66-8; phosphate, 14066-19-4, 14265-44-2; silymarin, 65666-07-1

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