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Durable Antihyperglycemic Effect of 6-*O*-Caffeoylsophorose with α -Glucosidase Inhibitory Activity in Rats

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To evaluate the duration of antihyperglycemic effects of 6-*O*-caffeoylsophorose (CS), a newly identified natural α -glucosidase inhibitor from fermented purple-sweet potato, a single oral administration of CS was given to maltose-loaded Sprague-Dawley rats. Administration of CS (200 mg/kg) 30 min or 60 min before maltose administration produced an elevation of blood glucose level by administration of 2 g/kg of maltose in rats that was significantly lower than for no administration (control). In contrast, simultaneous or pro-administration of CS with maltose eliminated the antihyperglycemic effect. CS significantly reduced rat intestinal α -glucosidase activity in all of the small intestinal mucosal regions with a maximal reduction ratio of ca. 40% up to 60 min after CS administration. Thereafter, the intestinal α -glucosidase activity tended to return to basal level. These findings suggest that the antihyperglycemic effect of CS is restricted to pre-administration within 60 min.

Keywords: [\$\alpha\$ -glucosidase](#), [caffeoylsophorose](#), [antihyperglycemic effect](#), [diabetes](#)

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