

P05 *Streptococcus* LJ-22, a human intestinal bacterium, transformed glycyrrhizin to 18 β -glycyrrhetic acid monoglucuronide

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Glycyrrhizin (18 β -glycyrrhetic acid β -D-glucuronyl α -D-glucuronic acid, GL), a main component of liquore extract (*Glycyrrhiza glabra*), is ingested orally as a component in the oriental medicine. By human intestinal bacteria, glycyrrhizin (18 β -glycyrrhetic acid β -D-glucuronyl α -D-glucuronic acid, GL) was metabolized to glycyrrhetic acid (GA): main pathway metabolizing GL to GA by glucuronidases of *Bacteroides* J-37 (Kim *et al.*, 1997) and *Eubacterium* *sp* strain GLH (Akao *et al.*, 1987) and minor pathway metabolizing GL to GA via 18 β -glycyrrhetic acid D-glucuronic acid (GAMG) by β -glucuronidase of *Streptococcus* LJ-22 and glucuronidases of *Bacteroides* J-37 / *E. coli*. β -Glucuronidase from *Streptococcus* LJ-22 hydrolyzed GL to GAMG, not GA. β -Glucuronidase of *Streptococcus* LJ-22 hydrolyzed β -glucuronic acid conjugates of polysaccharides rather than aglycone- β -glucuronides. Optimal pH of *Streptococcus* LJ-22 β -glucuronidase was 5-6 and its molecular weight was 250 kDaltons. Km for GL was 0.37mM.

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