

## Enzymatic characterization of LPH (Lactase-phlorizin hydrolase)

involved in intestinal absorption of natural product glycosides

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LPH (lactase-phlorizin hydrolase) is an important hydrolase in the brush border of the small intestine. LPH would play important roles in intestinal absorption of quercetin glycosides. The aim of the present study is to characterize the glycosidase activity of LPH towards natural product glycosides. The recombinant enzymes corresponding to human and rat LPH were used for glucosidase assays with various glycosides as a substrate. The recombinant LPH exhibited low glucosidase activity toward several glycosides. As for the regioselectivity of glucosylation positions, recombinant LPH preferentially hydrolyzed quercetin-4'-*O*glucoside. These data suggest that LPH has the substrate preference toward natural product glycosides.