

## Flavonoid UDP-glycosyltransferases from *Oryza sativa*

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### Abstract

Flavonoid is one of secondary metabolites in plant and their polyphenolic structure play roles of antioxidant activity, anticancer, antiviral. Generally storage types of flavonoids are flavonoid glucoside types. The glycosylated flavonoids have functions that increases solubility, changes in polarity, increases molecular stability. UDP-glycosyltransferase that use UDP-glucose as donor exist on superfamily in plant.

We cloned RGT10 from *Oryza.sativa* based on plant secondary product GT consensus sequence. The recombinant enzyme was expressed by glutathione-S transferase gene fusion system in *Escherichia coli*. RGT10 showed diversity substrates specificity and regioselectivity by analyzing HPLC. We used three types of flavonoids that are flavanone, flavonol, flavone as substrates. Regioselectivity of glycosylation was indicated for hydroxy group of the C-7 position. We consider that RGT10 have a function that transfer hydroxy group of C-7 to glucose.

### Reference

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