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## Human UGT1A10 SUPERSOMES™

Catalog Number.....456410  
Lot Number.....2406060

Storage Conditions..STORE AT -80°C  
Date Released .....2024 June | |  
Expiration Date.....2034 June

Package Contents.....0.5 mL  
Protein Content.....5.0 mg/mL in 0.1M Tris pH 7.5  
**7-Hydroxy-4-trifluoromethylcoumarin**  
Glucuronidation Activity.....180 pmole/(min x mg protein)

**PRODUCT DESCRIPTION:** This activity is catalyzed by UGT1A10 which is expressed from human UGT1A10 cDNA using a baculovirus expression system. Baculovirus infected insect cells (BTI-TN-5B1-4) were used to prepare these membranes. A membrane preparation using wild type virus (Catalog No. 456400) should be used as a control for native activities.

### ADVICE:

- Thaw rapidly in a 37°C water bath. Keep on ice until use.
- Aliquot to minimize freeze-thawing cycles. Initial thaw resulted in a 10% loss of catalytic activity. No further catalytic activity was lost after 8 freeze thaw cycles.
- Metabolite production using 7-hydroxy-4-trifluoromethylcoumarin glucuronidation as a substrate is linear with respect to enzyme concentration up to 0.8 mg/mL.
- Metabolite production with 7-hydroxy-4-trifluoromethylcoumarin is approximately linear for 30 minutes (see graph above). Other substrates may not exhibit similar linearity with respect to incubation time.

**HAZARD WARNING:** The product was produced using baculovirus (*Autographa californica*) infected insect cells (BTI-TN-5B1-4). This virus is not known to be pathogenic to humans or other mammals.

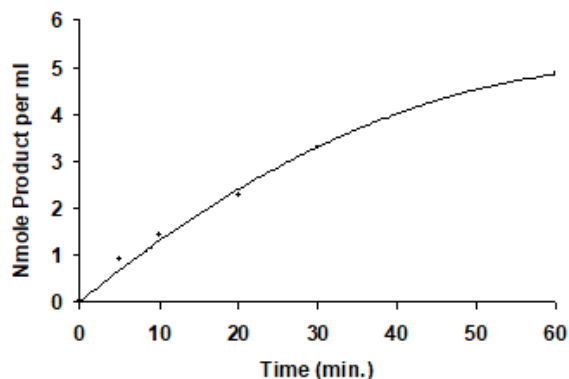
**SAFETY INFORMATION:** Safety assessment indicates this product is not hazardous, therefore no SDS (Safety Data Sheet) is provided. Use standard laboratory practices for the handling and disposal of Biosafety Level 1 materials.

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**ASSAY METHOD:** A 0.4 mL reaction mixture containing 0.25 mg/mL protein, 1 mM uridine diphosphoglucuronic acid (UDPGA), 10 mM magnesium chloride, 0.025 mg/mL alamethicin and 50  $\mu$ M 7-hydroxy-4-trifluoromethylcoumarin in 50 mM tris (pH 7.5) was incubated at 37°C for 20 minutes. After incubation, the reaction was stopped by the addition of 100  $\mu$ L 0.4  $\mu$ M labetalol in acetonitrile with 0.1% formic acid and centrifuged (10,000 x g) for 3 minutes. The product was detected by its Q1 and Q3 mass with negative polarity and quantitated by comparing the peak area ratio to a standard curve of 4-trifluoromethyl-7-hydroxycoumarin glucuronide.

Time Course of Product Formation



## ANALYTICAL METHOD:

### Materials

Column	2.1 x 50 mm 5 $\mu$ m C18 HPLC
Mobile Phase A	0.1% Formic Acid in dH <sub>2</sub> O
Mobile Phase B	0.1% Formic Acid in Acetonitrile

### Mass Transitions of MRM

Compound	Q1 Mass (amu)	Q3 Mass (amu)
Analyte- 4-trifluoromethyl-7-hydroxycoumarin glucuronide	405.1 $\pm$ 0.2	288.7 $\pm$ 0.2
Internal Standard- Labetalol	327.3 $\pm$ 0.2	176.0 $\pm$ 0.2

### Gradient Separation Conditions

Time (minute)	Flow Composition of Mobile Phase A (%)	Flow Composition of Mobile Phase B (%)	Flow Rate ( $\mu$ L /min)
0.0	95	5	750
2.5	5	95	750
2.6	95	5	750
3.6	95	5	750

17 June 2024

Quality Assurance

Date

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