

## Supporting Information

Characterization of human UDP-glucuronosyltransferases responsible for glucuronidation and inhibition of norbakuchinic acid, a primary metabolite of hepatotoxicity and nephrotoxicity component bakuchoil in *Psoralea corylifolia* L.

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## Figure Caption

**Figure S1** MS/MS spectra of norbakuchinic acid and its two glucuronides.

**Figure S2** Kinetic profiles for glucuronidation of norbakuchinic acid by various types of microsomes. (a) monkey liver microsomes (MkLM); (b) rat liver microsomes (RLM); (c) guinea pig liver microsomes (GpLM); (d) rabbit liver microsomes (RaLM); (e) dog liver microsomes (DLM); (f) mice liver microsomes (MLM); In each panel, the insert figure showed the corresponding Eadie-Hofstee plot. All experiments were performed in triplicate.

**Figure S3** Inhibition evaluation of NBKA toward Expressed UGT1A6-catalyzed 4-MU glucuronidation. Concentration-dependent plot (a) and Dixon plot (b) of NKBA's inhibition toward recombinant UGT1A6-catalyzed 4-MU glucuronidation. All experiments were performed in triplicate.

**Figure S4** Inhibition evaluation of NBKA toward Expressed UGT1A7-catalyzed 4-MU glucuronidation. Concentration-dependent plot (a) and Dixon plot (b) of NKBA's inhibition toward recombinant UGT1A7-catalyzed 4-MU glucuronidation. All experiments were performed in triplicate.

**Figure S5** Inhibition evaluation of NBKA toward Expressed UGT1A8-catalyzed 4-MU glucuronidation. Concentration-dependent plot (a) and Dixon plot (b) of NKBA's inhibition toward recombinant UGT1A8-catalyzed 4-MU glucuronidation. All experiments were performed in triplicate.

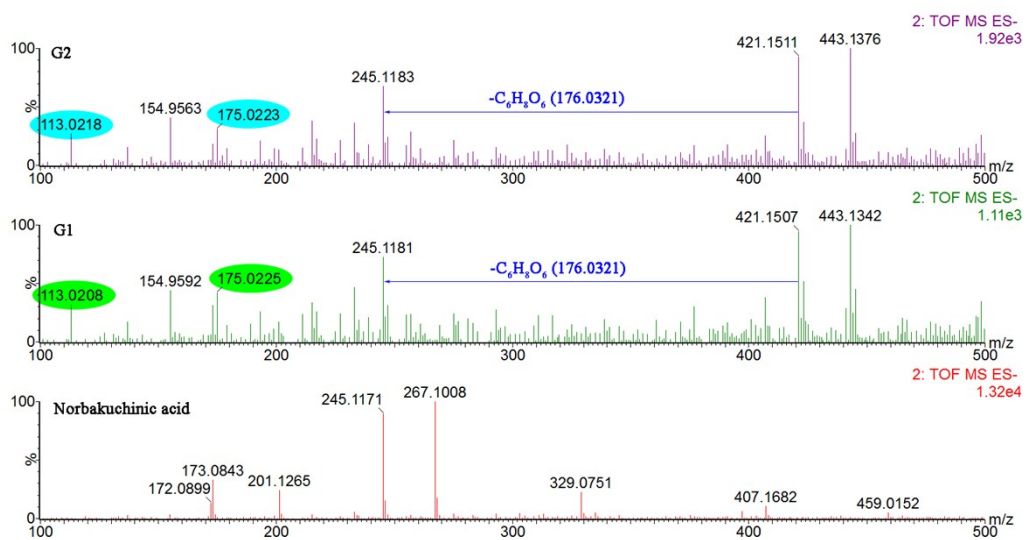
**Figure S6** Inhibition evaluation of NBKA toward Expressed UGT1A9-catalyzed propofol glucuronidation. Concentration-dependent plot (a) and Dixon plot (b) of NKBA's inhibition toward recombinant UGT1A9-catalyzed propofol glucuronidation. All experiments were performed in triplicate.

**Figure S7** Inhibition evaluation of NBKA toward Expressed UGT1A10-catalyzed 4-MU glucuronidation. Concentration-dependent plot (a) and Dixon plot (b) of NKBA's inhibition toward recombinant UGT1A10-catalyzed 4-MU glucuronidation. All experiments were performed in triplicate.

**Figure S8** Inhibition evaluation of NBKA toward Expressed UGT2B7-catalyzed AZT glucuronidation. Concentration-dependent plot (a) and Dixon plot (b) of NKBA's inhibition toward recombinant UGT2B7-catalyzed AZT glucuronidation. All experiments were performed in triplicate.

**Figure S9** Inhibition evaluation of NBKA toward Expressed UGT2B15-catalyzed 4-MU glucuronidation. Concentration-dependent plot (a) and Dixon plot (b) of NKBA's inhibition toward recombinant UGT2B15-catalyzed 4-MU glucuronidation. All experiments were performed in triplicate.

**Figure S10** Inhibition evaluation of NBKA toward Expressed UGT2B17-catalyzed SAHA glucuronidation. Concentration-dependent plot (a) and Dixon plot (b) of NKBA's inhibition toward recombinant UGT2B17-catalyzed SAHA glucuronidation. All experiments were performed in triplicate.



**Figure S1** MS/MS spectra of norbakuchinic acid and its two glucuronides.

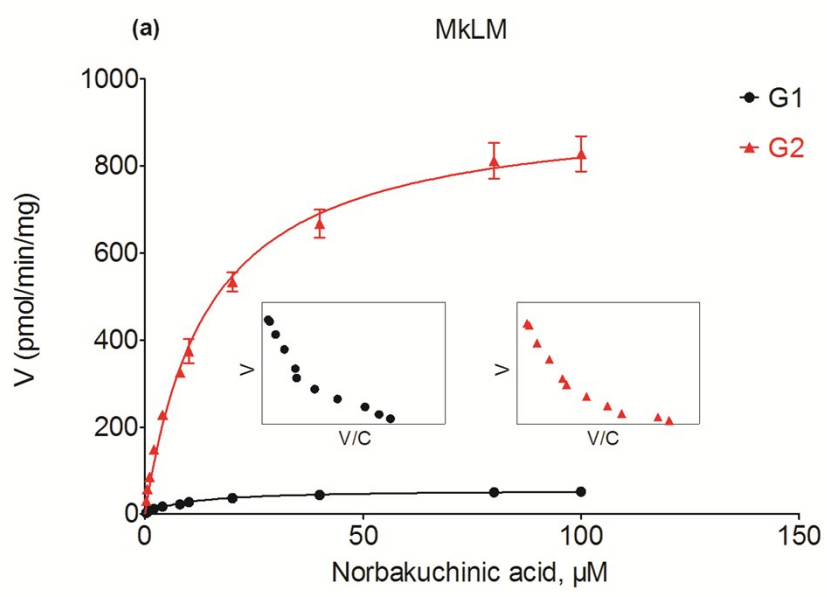


Figure S2-a

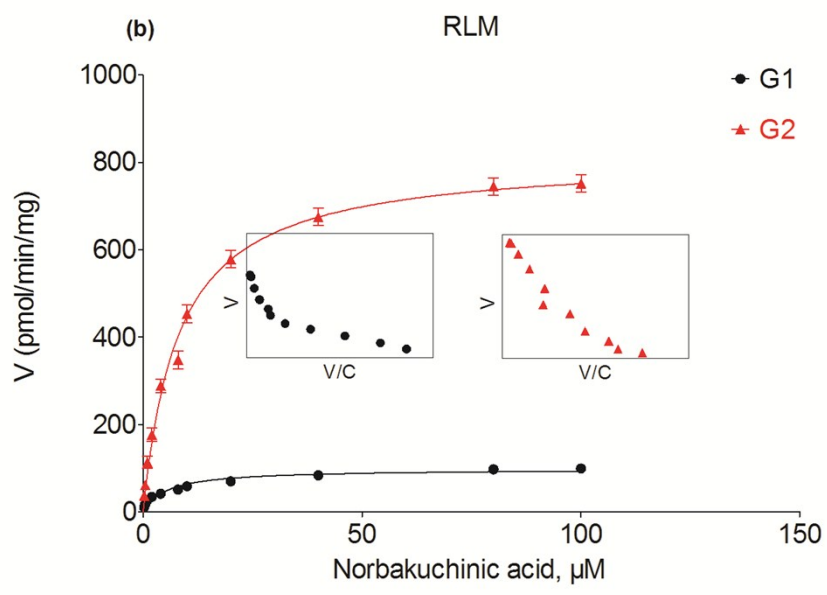


Figure S2-b

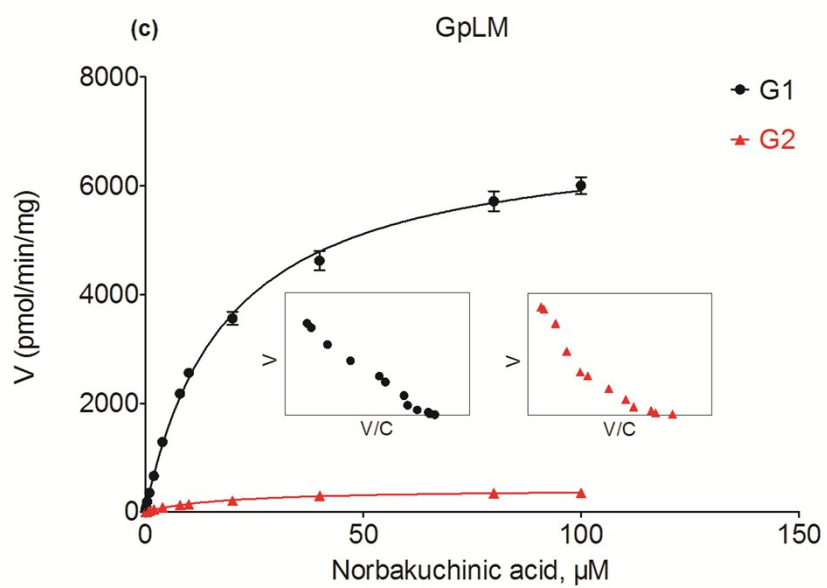


Figure S2-c

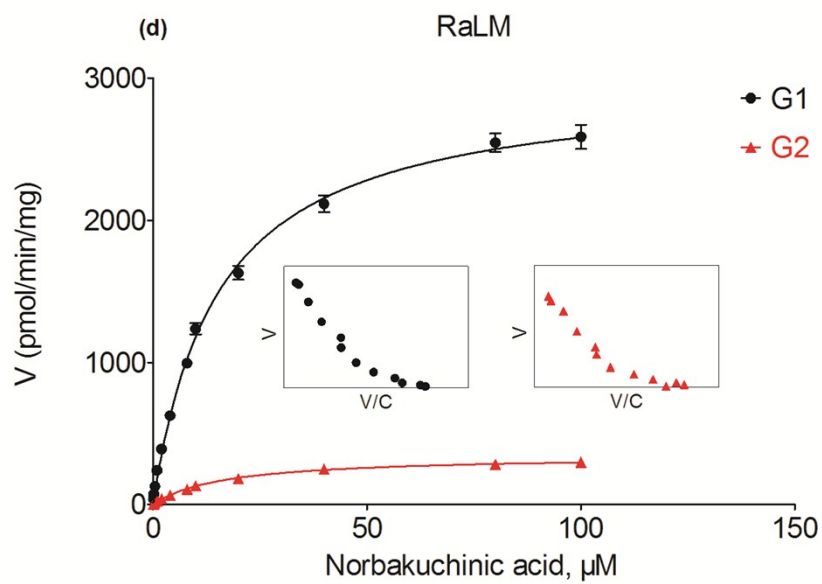
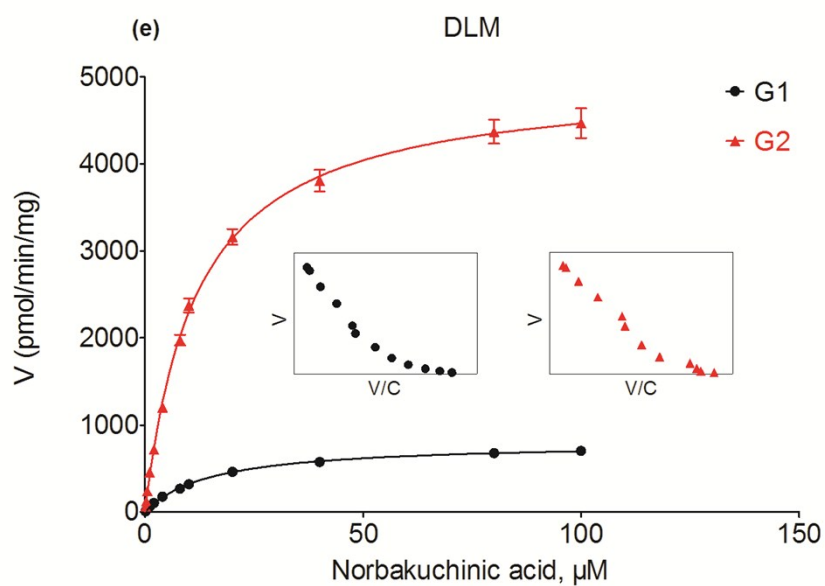
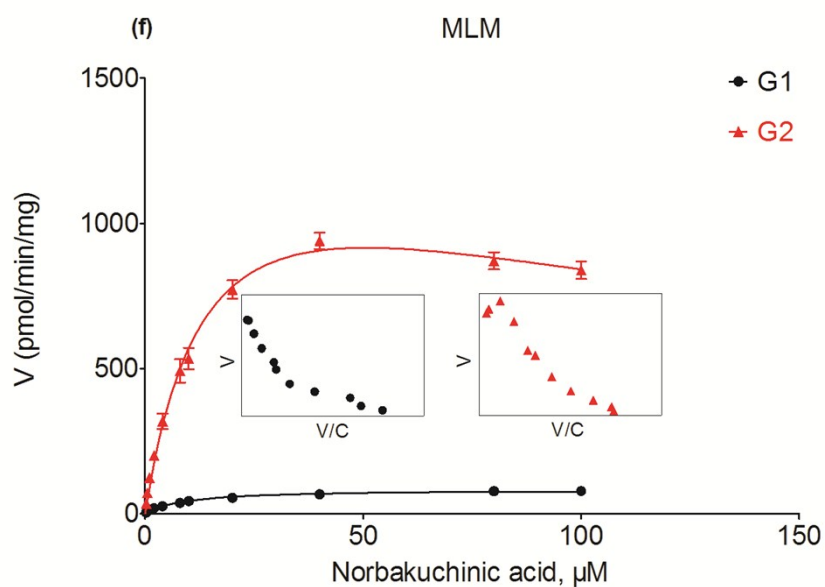


Figure S2-d

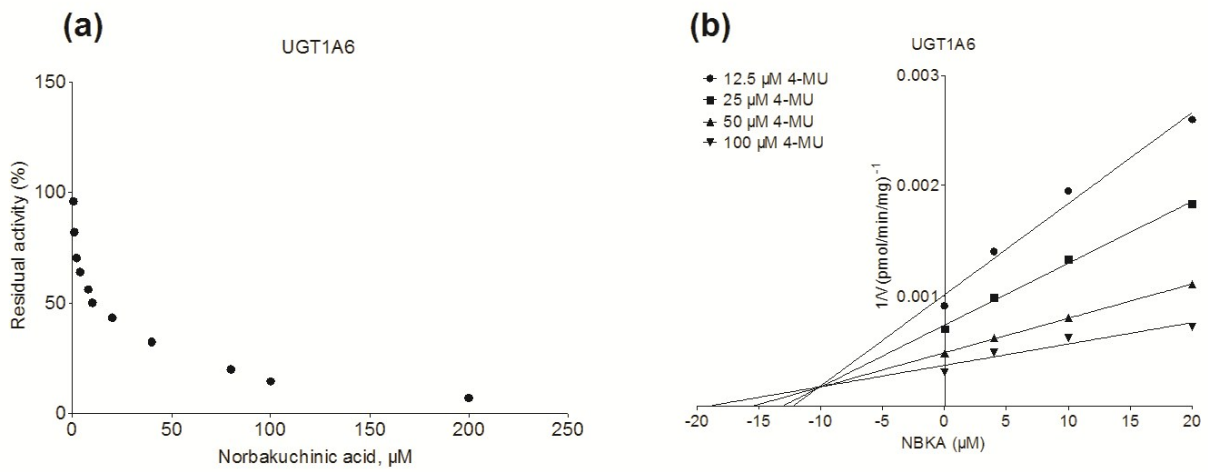


**Figure S2-e**



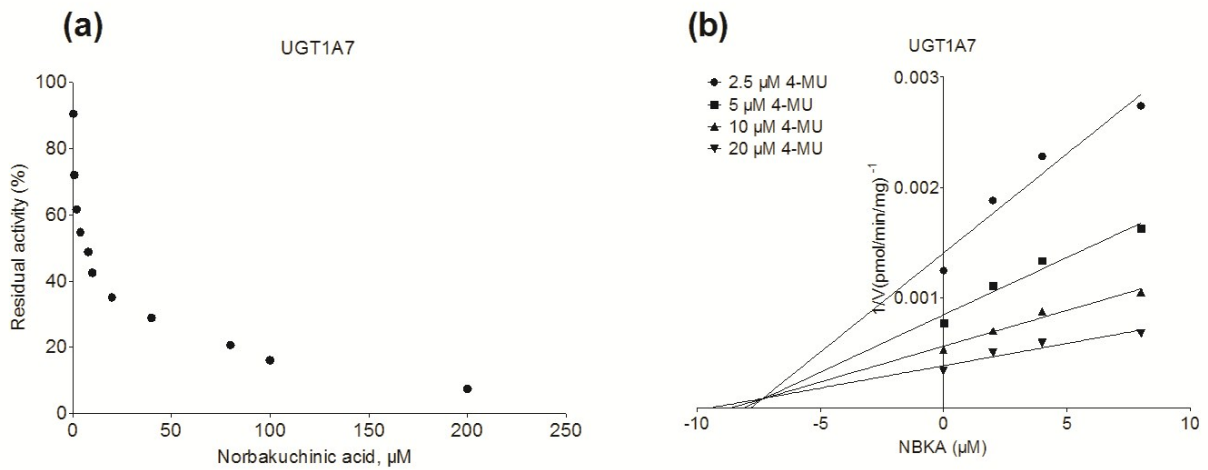
**Figure S2-f**

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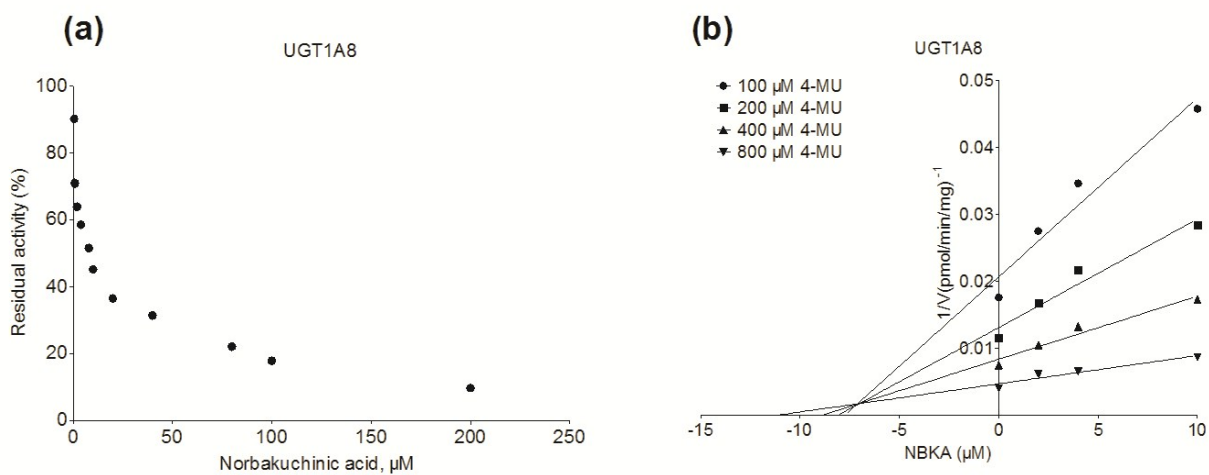


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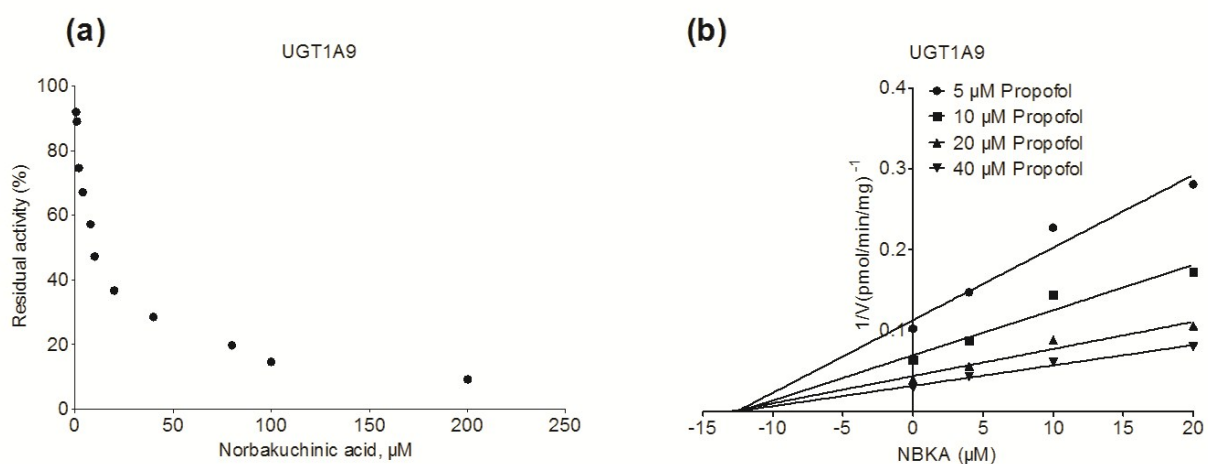




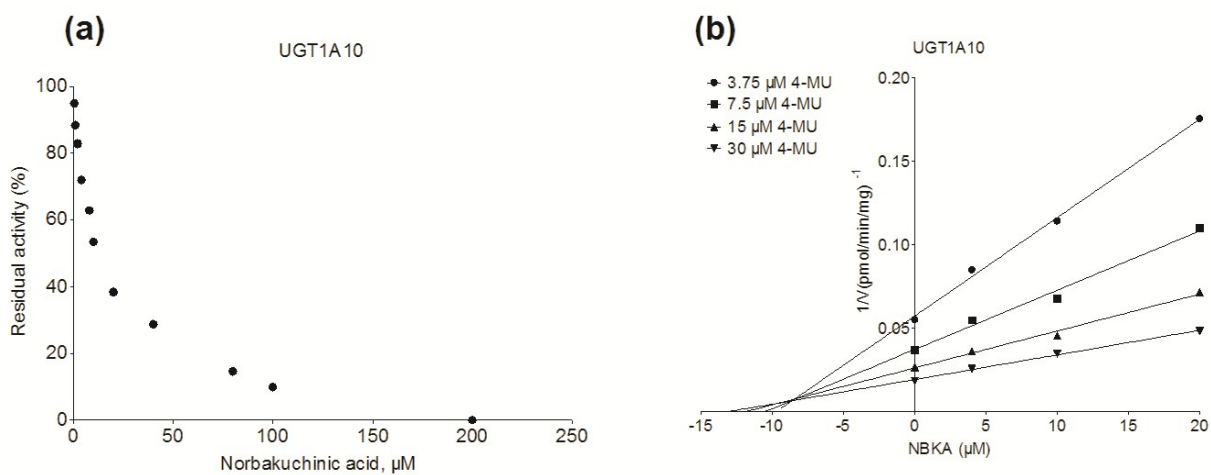
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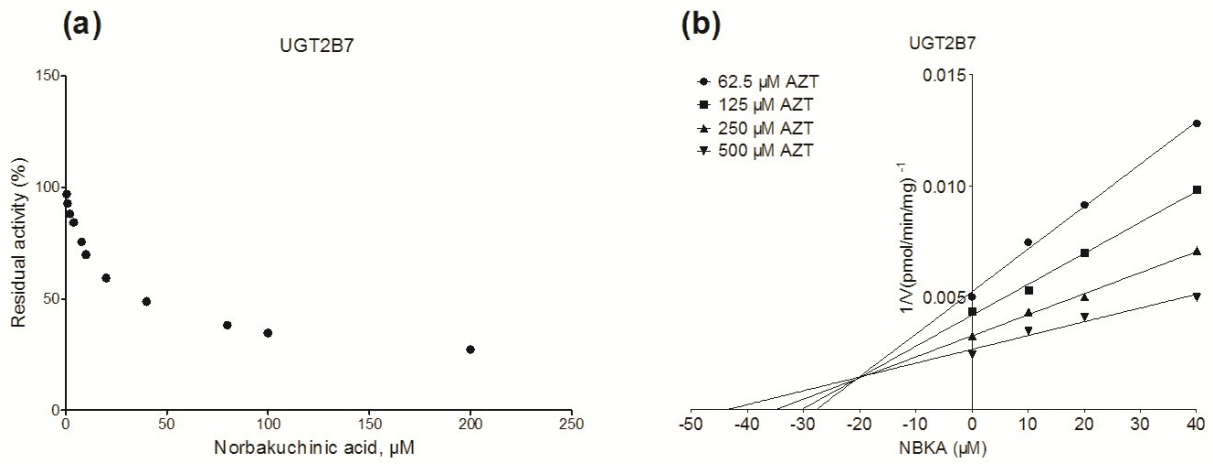
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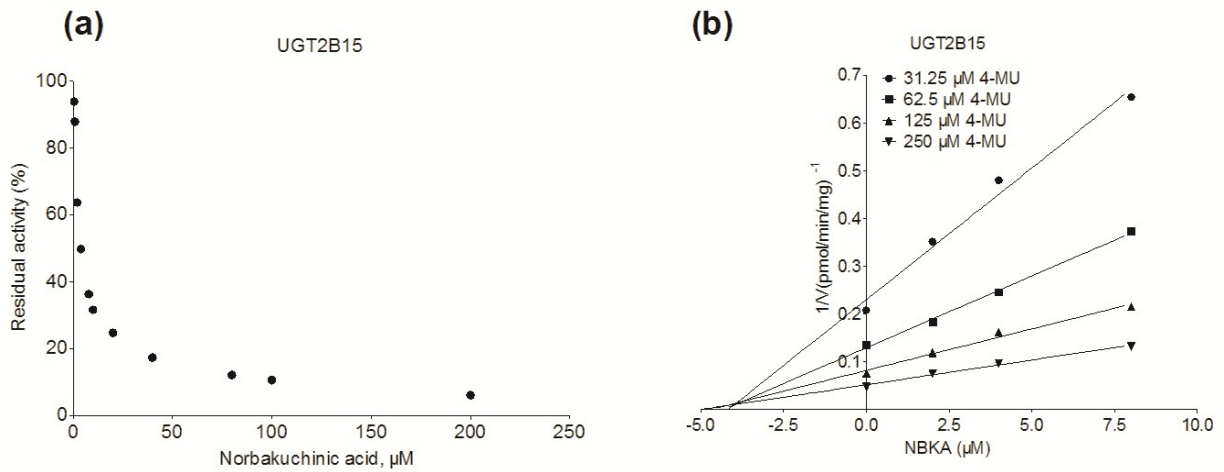
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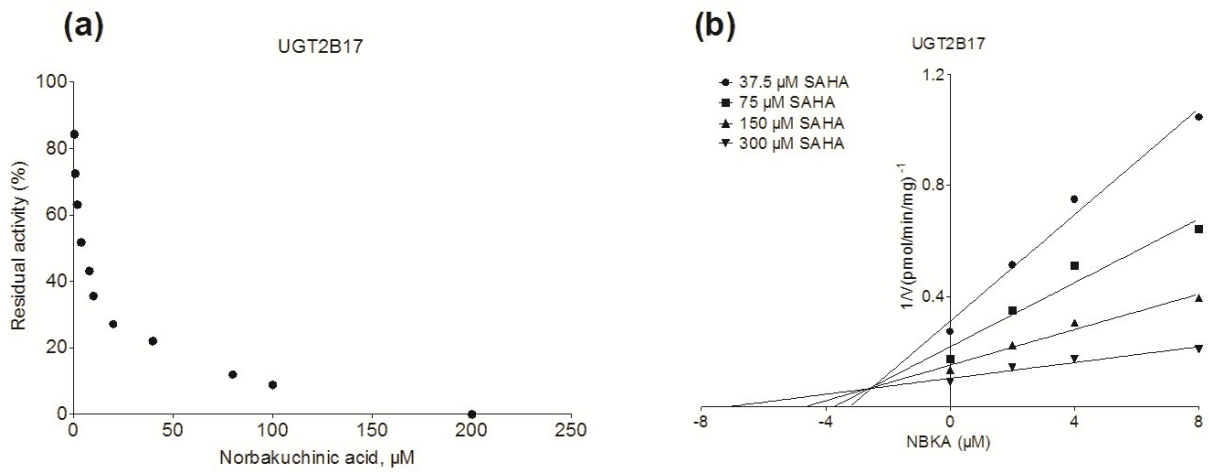
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**Figure S8** Inhibition evaluation of NBKA toward Expressed UGT2B7-catalyzed AZT glucuronidation. Concentration-dependent plot (a) and Dixon plot (b) of NBKA's inhibition toward recombinant UGT2B7-catalyzed AZT glucuronidation. All experiments were performed in triplicate.



**Figure S9** Inhibition evaluation of NBKA toward Expressed UGT2B15-catalyzed 4-MU glucuronidation. Concentration-dependent plot (a) and Dixon plot (b) of NBKA's inhibition toward recombinant UGT2B15-catalyzed 4-MU glucuronidation. All experiments were performed in triplicate.



**Figure S10** Inhibition evaluation of NBKA toward Expressed UGT2B17-catalyzed SAHA glucuronidation. Concentration-dependent plot (a) and Dixon plot (b) of NBKA's inhibition toward recombinant UGT2B17-catalyzed SAHA glucuronidation. All experiments were performed in triplicate.