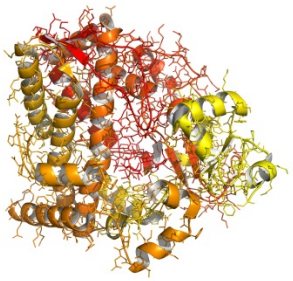

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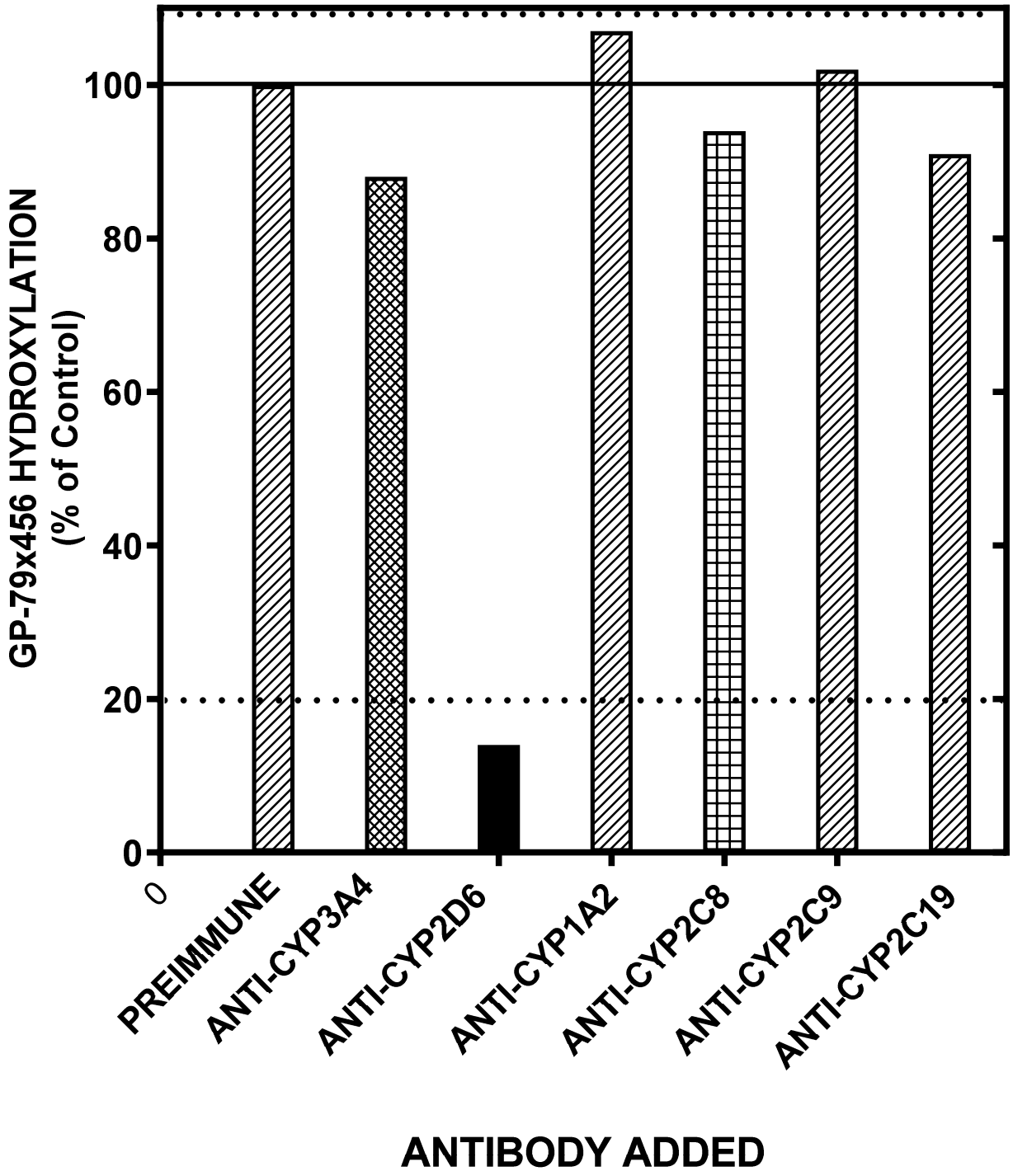
P450 REACTION PHENOTYPING

A description of our reaction phenotyping methodology is given in the **PROTOCOLS** section under *Antibody Inhibition*. An NCE of interest (designated herein as GP-79x456) is known to undergo metabolism by human liver microsomes to a single major product, namely 2-hydroxy GP-79x456. However, the P450 catalyst underlying this oxidation reaction has not yet been identified. In a typical phenotyping study, GP-79x456 would be reacted with NADPH-fortified liver microsomes in the presence of fixed amounts of antibodies against the major drug-metabolizing P450s. These same antibodies comprise our CYP ImmunoScreen Kit (Hu-A011). Afterwards, formation of the reaction product 2-hydroxy GP-79x456 would be analyzed, and rates of product formation vs specific P450 antibody added to assay then derived. In the example shown below, 2-hydroxylation of GP-79x456 was inhibited by only a single P450 antibody, namely anti-CYP2D6, providing unambiguous evidence that CYP2D6 promotes this GP-79x456-metabolizing reaction in liver from this subject. Similar studies would then be performed in other subjects to confirm involvement of CYP2D6 in liver microsomal GP-79x456 2-hydroxylation. An immunotitration experiment performed with anti-CYP2D6 (see *Antibody Inhibition*) could then be done to reveal the extent of CYP2D6 participation in GP-79x456 metabolism, and whether other P450 enzymes can also metabolize this compound.

Contact sales@cyp450-gp.com to learn more about our P450 Reaction Phenotyping studies.


GP-79x456 HYDROXYLATION
(% of Control)
100
80
60
40
20
0
0
PREIMMUNE
ANTI-CYP3A4
ANTI-CYP2D6
ANTI-CYP1A2
ANTI-CYP2C8
ANTI-CYP2C9
ANTI-CYP2C19
ANTIBODY ADDED