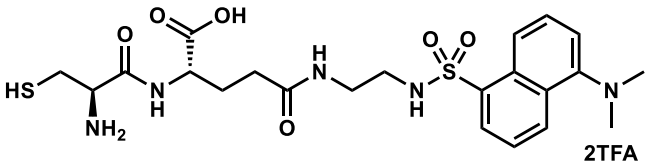
# Watanabe Chemical News

WN-230309-980

# Trapping Reagents

Specification, Stock status

## CysGlu-Dan

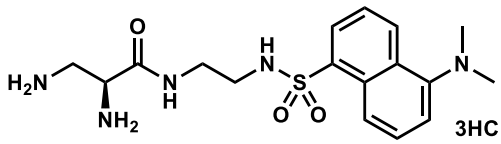


| | | | | |
|---|---|---|---|---|
| Product code | R00846 | Price | 10mg | $375 |
| CAS RN | 2941222-88-2 | | 50mg | $1,500 |
| | | | 100mg | $2,667 |

**For the detection of CYP-dependent reactive metabolites**

*Detectable both "hard" and "soft" reactive metabolites*

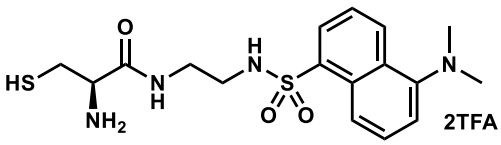
## Dap-Dan



| | | | | |
|---|---|---|---|---|
| Product code | R00845 | Price | 10mg | $134 |
| CAS RN | 2784651-18-7 | | 50mg | $400 |
| | | | 100mg | $717 |

**For the detection of reactive acyl glucuronides**

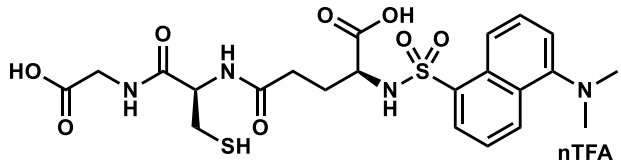
## Cys-Dan



| | | | | |
|---|---|---|---|---|
| Product code | R00847 | Price | 10mg | $250 |
| CAS RN | 2941222-89-3 | | 50mg | $1,000 |
| | | | 100mg | $1,667 |

**For the detection of reactive acyl-CoA**

## Dansyl-GSH



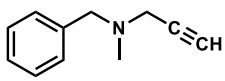
| | | | | |
|---|---|---|---|---|
| Product code | R02168 | Price | 10mg | $225 |
| CAS RN | 75017-02-6 | | 50mg | $750 |
| | | | 100mg | $1,167 |

**For the detection of CYP-dependent reactive metabolites**

*Detectable only "soft" reactive metabolites*

## CysGlu-Dan

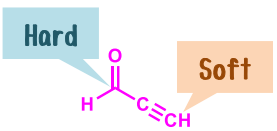
CysGlu-Dan can be used in the replacement of Dansyl-GSH as a detection reagent. While Dansyl-GSH can only detect reactive metabolites with "soft" electrophilicity, CysGlu-Dan can also detect reactive metabolites with "hard" electrophilicity.



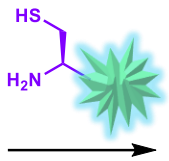
Pargyline

*MAO-B Inhibitor*
*Drug for Parkinson's Syndrome*

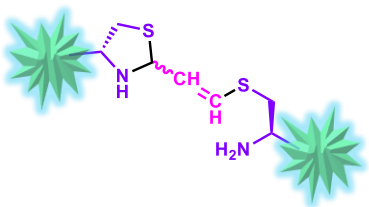
CYP Oxidation




Propargyl aldehyde



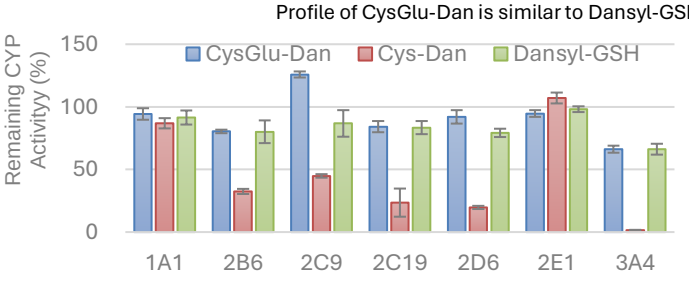
CysGlu-Dan

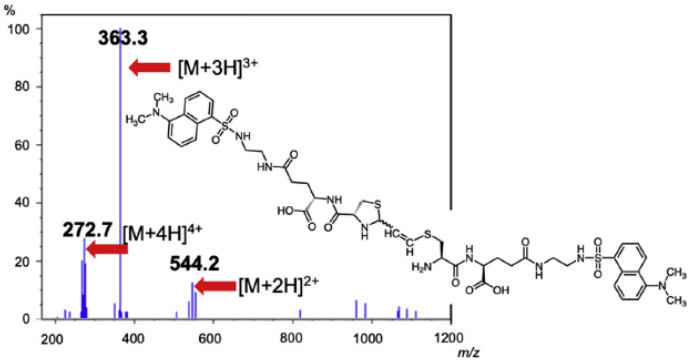


Proposed adduct structure

### CYP inhibition profile of each trapping reagent

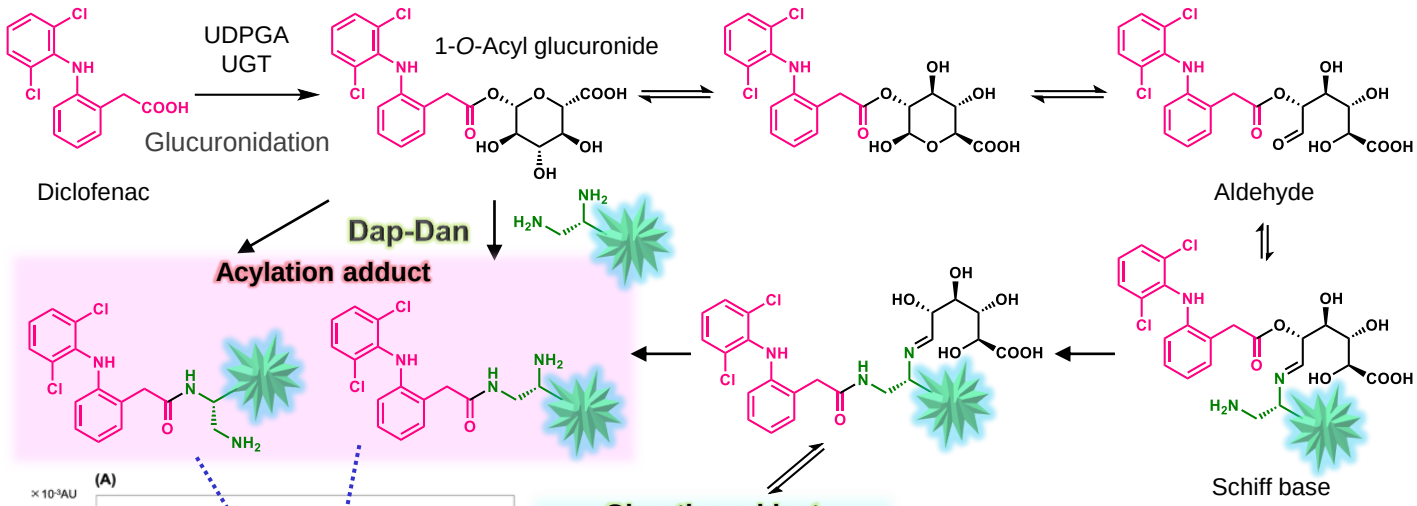
Profile of CysGlu-Dan is similar to Dansyl-GSH.

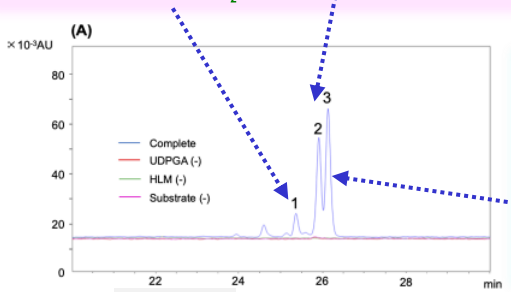


## Dap-Dan

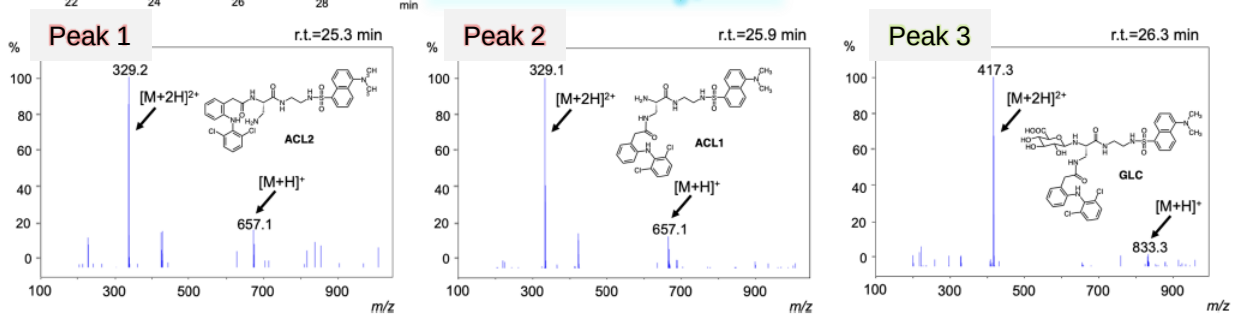
Acyl glucuronides are trapped with Dap-Dan and can be detected as acylation and/or glycation adducts of Dap-Dan.



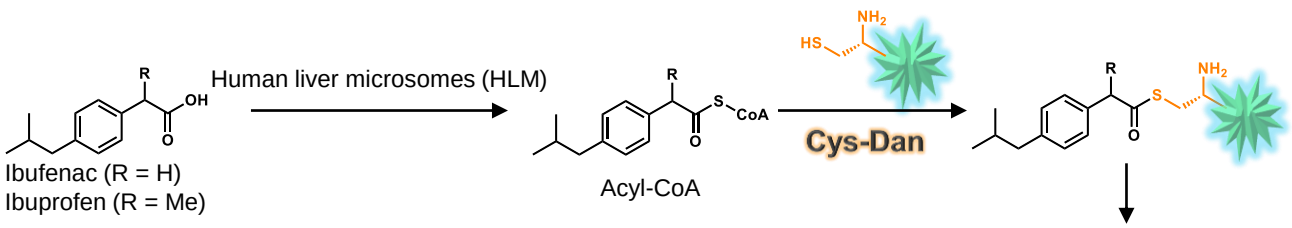

Inhibitory ability of Dap-Dan against UGTs

| | Remaining UGT Activity (%) |
|---|---|
| UGT1A1 | 81.0 ± 2.7 |
| UGT2B7 | 93.9 ± 1.7 |




## Cys-Dan

Reactive acyl-CoAs are trapped with Cys-Dan and can be detected as the adduct.




| Trapping Reagent | | CysGlu-Dan | Dap-Dan | Cys-Dan |
|---|---|---|---|---|
| Adduct peak area [$10^{-3}$AU × s] | Ibufenac | 67 | ND | **126** |
| | Ibuprofen | 10 | ND | **54** |


参考文献

1. Shibazaki C. Ohe T. Takahashi K. Nakamura S. Mashino T. Development of fluorescent-labeled trapping reagents based on cysteine to detect soft and hard electrophilic reactive metabolites. *Drug Metab. Pharmacokinet*. 2021, 39, No. 100386.
2. Shibazaki C. Mashita O. Takahashi K. Nakamura S. Mashino T. Ohe T. Development of a Fluorescent-Labeled Trapping Reagent to Detect Reactive Acyl Glucuronides. *Chem. Res. Toxicol*. 2021, 34, 2343-2352.
3. Shibazaki C. Mashino T. Ohe T. Development of a fluorescent-labeled trapping reagent to evaluate the risk posed by acyl-CoA conjugates. *Drug Metab. Pharmacokinet*. 2023, 52, No. 100509.



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