

# Biocatalytic Enzymes Screening Tools For Feasibility Assessment

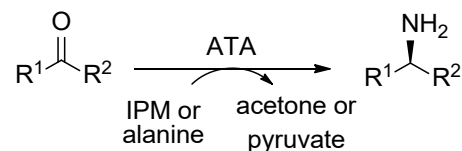
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## KETOREDUCTASES (KRED)



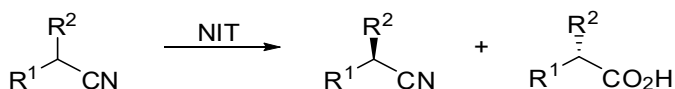
PRODUCT	# OF ENZYMES	FORMAT	AVAILABILITY
Codex® KRED Screening Kit	24	Vials (250 mg)	Off-the-shelf
Codex® KRED Panel	~ 288	96-well plate	Made-to-order batch

## TRANSAMINASES (ATA)



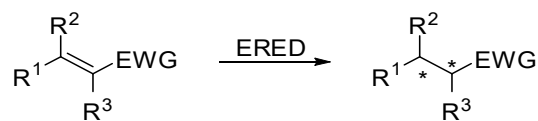
PRODUCT	# OF ENZYMES	FORMAT	AVAILABILITY
Codex® ATA Screening Kit	24	Vials (250 mg)	Off-the-shelf
Codex® ATA Panel	~ 96	96-well plate	Made-to-order batch

## NITRILASES (NIT)



PRODUCT	# OF ENZYMES	FORMAT	AVAILABILITY
Codex® NIT Screening Kit	12	Vials (250 mg)	Off-the-shelf

## ENE REDUCTASES (ERED)



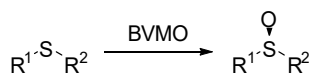
PRODUCT	# OF ENZYMES	FORMAT	AVAILABILITY
Codex® ERED Screening Kit	7	Vials (250 mg)	Off-the-shelf
Codex® ERED Panel	~ 96	96-well plate	Made-to-order batch

## BAEYER-VILLIGER MONOOXYGENASES (BVMO)

### Baeyer-Villiger Oxidation

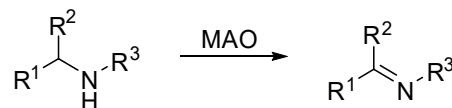


### Sulfoxidation



PRODUCT	# OF ENZYMES	FORMAT	AVAILABILITY
Codex® BVMO Panel	~ 192	96-well plate	Made-to-order batch

## MONOAMINE OXIDASES (MAO)



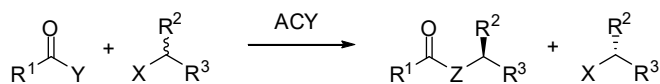
PRODUCT	# OF ENZYMES	FORMAT	AVAILABILITY
Codex® MAO Panel	~ 96	96-well plate	Made-to-order batch

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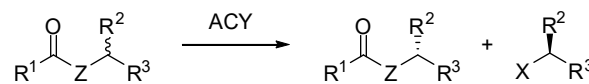
## ACYLASES (ACY)

### Condensation



X=OH, NH<sub>2</sub> / Y=OH, NH<sub>2</sub>, OMe / Z=O, NH  
R<sup>1</sup>= -CH<sub>2</sub>Ar, -CH<sub>2</sub>OAr, -CH(Y)Ar

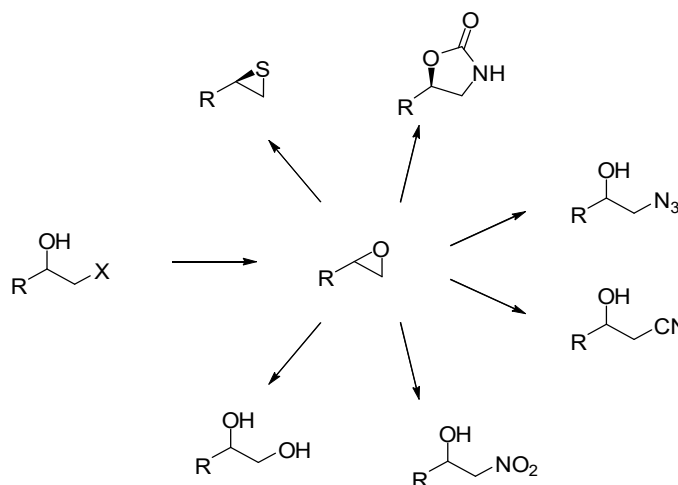
### Resolution



X=OH, NH<sub>2</sub> / Y=OH, NH<sub>2</sub>, OMe / Z=O, NH  
R<sup>1</sup>= -CH<sub>2</sub>Ar, -CH<sub>2</sub>OAr, -CH(Y)Ar

PRODUCT	# OF ENZYMES	FORMAT	AVAILABILITY
Codex <sup>®</sup> ACY Panel	~ 96	96-well plate	Made-to-order batch

## HALOHYDRIN DEHALOGENASES (HHDH)

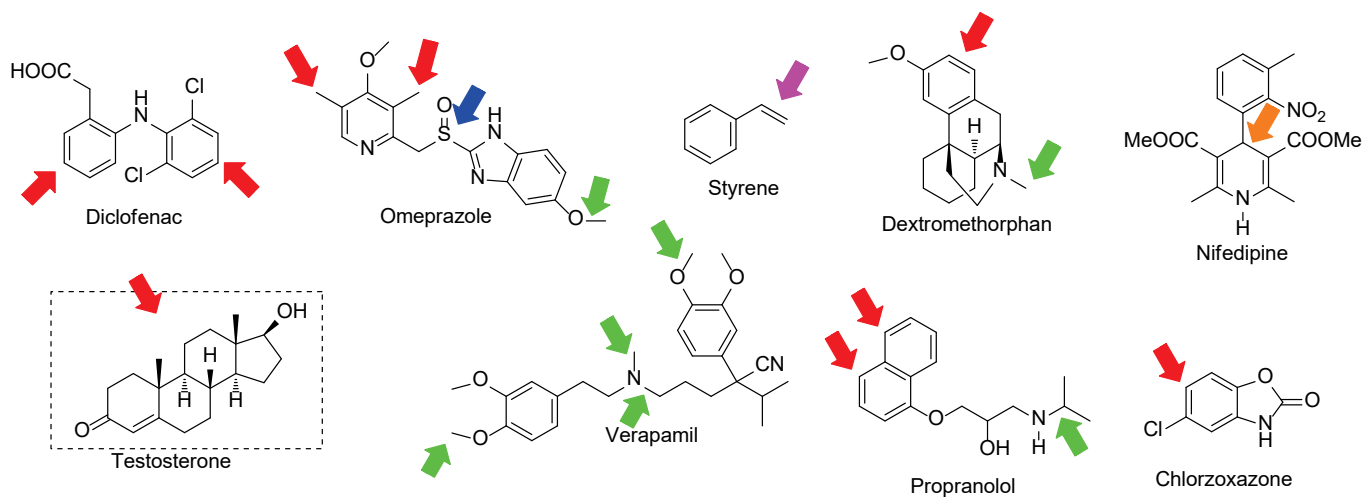


PRODUCT	# OF ENZYMES	FORMAT	AVAILABILITY
Codex <sup>®</sup> HHDH Panel	~ 192	96-well plate	Made-to-order batch

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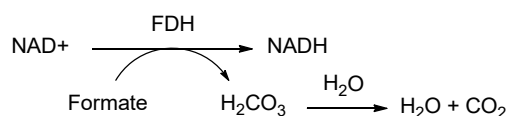
## MICROCYP® (MCYP®) P450 ENZYMES



hydroxylation / O- and N-dealkylation / heteroatom oxidation / dehydrogenation / epoxidation

PRODUCT	# OF ENZYMES	FORMAT	AVAILABILITY
Codex® MCYP® Standard Kit	23	24-well plate   2.4 nmol/well	Off-the-shelf
Codex® MCYP® Elite Kit	11 (in duplicates)	24-well plate   2.4 nmol/well	Off-the-shelf

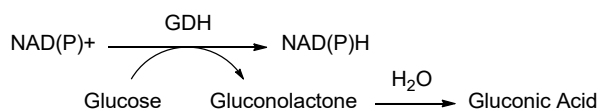
## FORMATE DEHYDROGENASE



Formate Dehydrogenases (FDHs) enable the regeneration of NADH from NAD<sup>+</sup> by catalyzing the oxidation of formate to bicarbonate. The driving force is the release of CO<sub>2</sub>.

**FDH-101** is a natural enzyme with a specific activity of ≥ 1.0 U/mg.

## GLUCOSE DEHYDROGENASE



Glucose Dehydrogenases enable the regeneration of NAD(P)H from NAD(P)<sup>+</sup> by catalyzing the oxidation of β-D-glucose to D-glucono-1,5-lactone. Note that D-glucono-1,5-lactone is easily hydrolyzed to gluconic acid, lowering the pH of the reaction.

Codexis offers two engineered GDHs: **GDH-105** and **CDX-901**. **CDX-901** has a specific activity of ≥ 50 U/mg and is more cost-effective. **GDH-105** has a specific activity of ≥ 44 U/mg and can operate at a wider pH and temperature range.

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## ADDITIONAL PRODUCT INFORMATION

- Off-the-shelf lead times are generally 5 – 7 days after PO receipt. Made-to-order batch lead times may vary.
- Codex® enzymes are engineered for enhanced selectivity, activity, substrate range and solvent, and temperature stability compared to natural enzymes.
- Codex® Screening Kits contain a carefully selected subset of Codex® enzyme libraries having moderate to high activity and selectivity on a range of substrates. These kits are ideal to quickly determine feasibility and will often provide an enzyme that is suitable to prepare the initial kilogram of product.
- All enzymes in Codex® Screening Kits are stocked to a minimum of a 50 – 100g quantity level to enable rapid product scale-up.
- Codex® Panels may be screened to provide data to generate improved enzymes using the CodeEvolver® technology platform.
- Codexis offers enzymes for sustainable manufacturing in addition to those listed above. For further information, please contact us at: [sales@codexis.com](mailto:sales@codexis.com).

*All Codex® products are sold under the Codexis standard terms and conditions.*