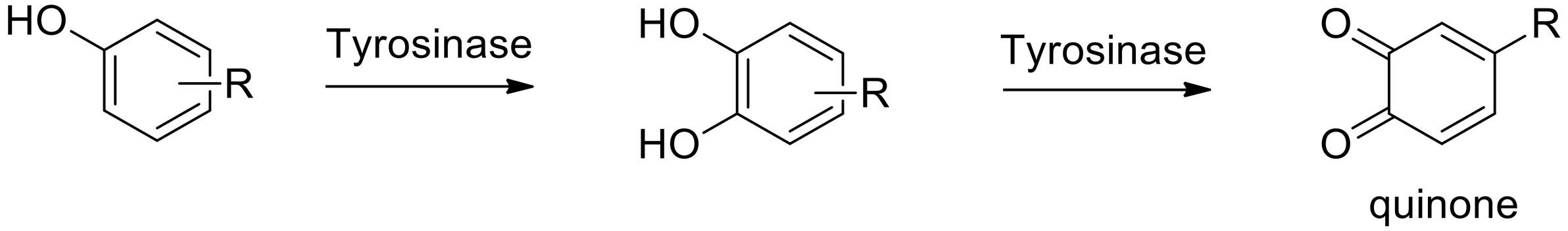
Tyrosinase (Tyr) Enzyme Screening Kit

TyrESK-500 (50 mg)

Partnering to Advance Human Health

Applications

Tyrosinase enzymes (Tyr) catalyse the oxidation of Tyrosine and other monohydritic phenols. The mechanism involves the oxidation of the phenol to the corresponding o-quinone as shown in the scheme below.



Kit description

The kit contains 5 diverse pre-formulated Tyrosinase biocatalysts as lyophilised powders.

The enzymes supplied have not been extensively characterised therefore data regarding their substrate range and activity is limited.

Tyr enzymes contained in the screening kit

Tyr 101	Tyr 102	Tyr 103	Tyr 104	Tyr 105

Contents

Tyr	5 enzymes (50 mg)
DMSO	1 vial (5 mL)
0.05M KH_2PO_4 pH (6.5)	1 bottle (30 mL)

Screening Procedure

1. Label 5 x 2 mL vials corresponding to the five different Tyr enzymes provided in the kit.
2. Add 10 mg of enzyme into the labelled vial.
3. Add 450 µL of buffer.
4. Add a solution of 10 mg of substrate in appropriate solvent e.g. DMSO or MTBE (50-100 µl, depending on solubility)
5. Incubate overnight at 37 °C with agitation.
6. Analyse sample by GC/HPLC to determine the conversion.

It is recommended to make the solutions fresh and use immediately. Avoid storage of the reaction reagents as a solution, as this will degrade over time (for long term storage of buffer freeze at -20 °C). An adequate supply of reaction components and buffer is provided for screening. Additional reaction components or buffers can be purchased from Almac if required.

Storage: Recommend refrigeration at 4°C to preserve enzyme activity.

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ALMAC

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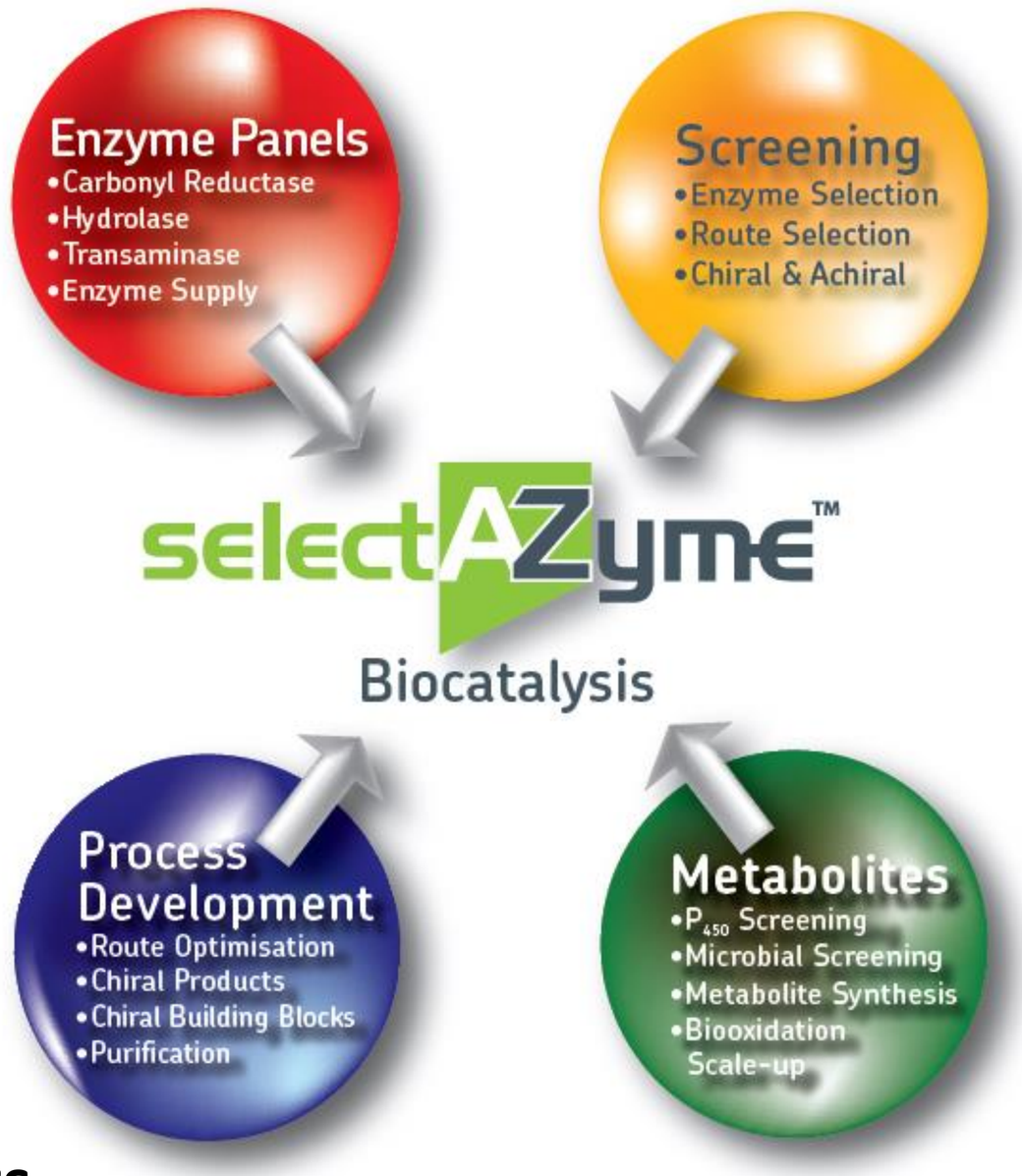
selectAZyme™

selectAZyme Offerings

- An ever-expanding biocatalysis team including molecular and microbiologists, enzymologists, bioinformaticians, organic chemists and analysts, all equipped with state-of-the art facilities.
- Expertise in gene identification, expression, fermentation and enzyme production, followed by the efficient use of enzymes to produce complex chiral APIs.
- Enzyme evolution based on computational re-design, semi-rational and random mutagenesis approaches, allowing access to bespoke biocatalysts with enhanced activity, selectivity and process robustness.
- Fully integrated biocatalyst development through screening, (chemo-) enzymatic route definition, process development and scale up (pilot plant facilities available).
- Rapid implementation of enzymatic steps in complex, multi-stage syntheses, leading to significant improvements in production yields and timelines.
- A simple business model that avoids IP issues.



The selectAZyme Range of Enzyme Screening Kits

Our selectAZmye kits include a detailed user guide and come with all buffers, cofactors, recycling systems and reagents necessary to perform screens using standard laboratory equipment.

Carbonyl Reductase (CRED) biocatalysts

96 CRED biocatalysts for the production of chiral alcohols and/or use in cofactor recycling schemes

Aldehyde Reductase (ARED) biocatalysts

16 ARED biocatalysts

Hydrolase biocatalysts

48 commercially available hydrolases for selective acylation of alcohols and amines.

Nitrilase and Nitrile Hydratase (NHase) biocatalysts

9 NHases and 15 nitrilases

Transaminase (TAm) biocatalysts

96 TAms for the prodcution of chiral amines from pro-chiral ketones.

Ene Reductase (ERED) biocatalysts

143 ERED biocatalysts for asymmetric reduction of activated alkenes

P450 Monooxygenase biocatalysts

96 P450 monooxygenase biocatalysts for a huge range of highly selective oxidations

Want Almac to do the screening for you?

- Our experienced biocatalysis team can screen all of our enzymes against your target substrate(s) and simply provide the results.
- Flexible options for subsequent enzyme supply, evolution services, process development and scale up as required.

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