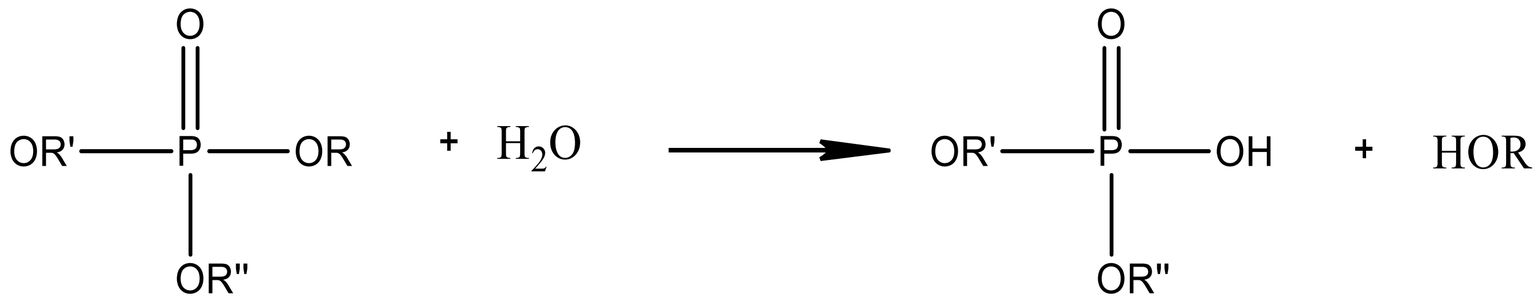
# Phosphotriesterase (PTE) Enzyme Screening Kit

# PTEESK-800

Partnering to Advance Human Health

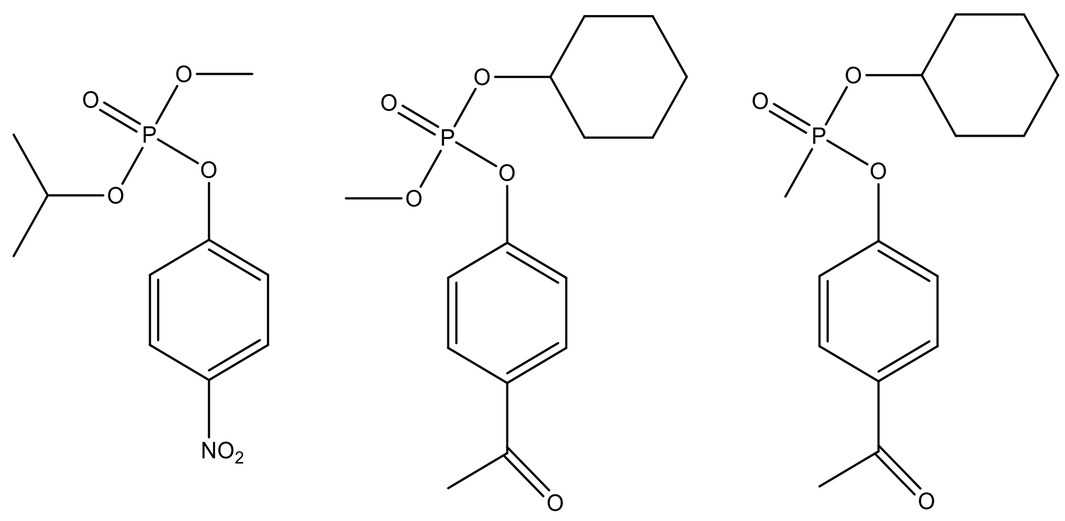
## Applications

Selective hydrolysis of phosphotiriester compounds in aqueous media.




## Substrate range

A wide variety of structurally diverse phosphotriesters. A selection is shown below.




## Kit description

The kit contains 8 diverse pre-formulated phosphotriesterase (PTE) biocatalysts as lyophilised powders.

***PTEs present in enzyme kit***

| |
|---|
| PTE-001 |
| PTE-002 |
| PTE-003 |
| PTE-004 |
| PTE-005 |
| PTE-006 |
| PTE-007 |
| PTE-008 |

## Contents

| | |
|---|---|
| PTEs | 8 enzymes (50 mg each) |
| 0.1M Tris buffer (pH 7.4) | 1 bottle (50 mL) |

## Screening Procedure

1.Add into a flask/vial, add 10 mg phophotriesterase enzyme in 500 µL Tris-HCl buffer pH 7.4*.

2.Add a solution of ~1 mg substrate. If needed, the substrate can be dissolved in organic solvent such as DMSO or MTBE (5-10% of the final volume).

3.Add buffer to a final concentration of 1 mL.

4.Shake/stir at room temperature (or ideally 30 ºC). Agitate overnight.

5.Extract product with an organic solvent (MTBE, EtOAc etc.), if needed.

6.Analyse sample by GC/HPLC to determine conversion.

*It is recommended to make the components fresh and use immediately.

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

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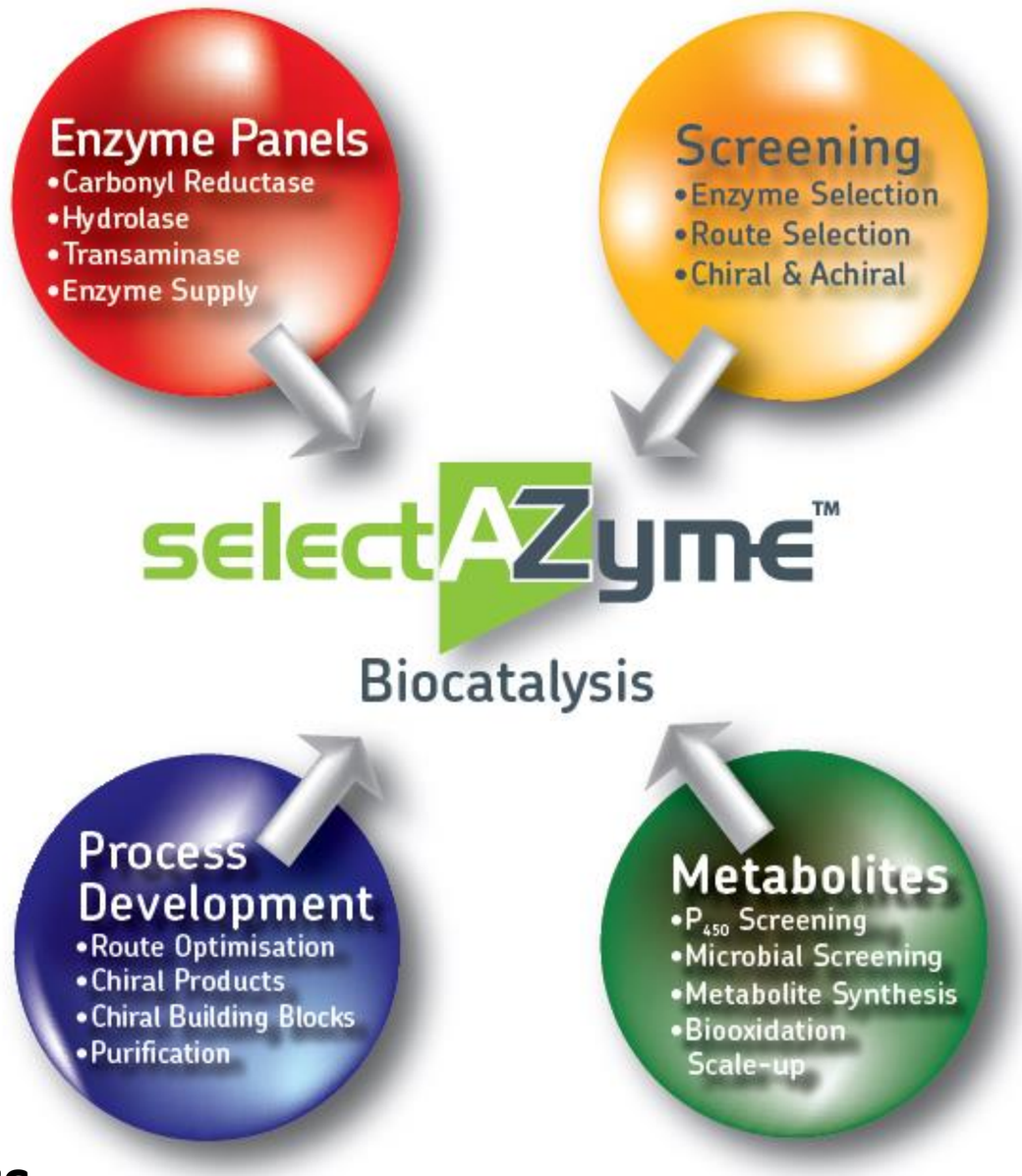
ALMAC

Partnering to Advance Human Health

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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