


SEQENZYM



**FAST
SCREENING TOWARD
INNOVATION**

Discover our kits

SEQENZYM

ENZYMES IN BRIEF:

Enzymes are biocatalysts which present many advantages compared to usual organic/metal catalysts:

- Very high diversity of enzymes adapted for specific reactions
- Reaching the Green chemistry principles: a very low environment footprint
- Enzymes are totally biodegradable and non-toxic
- Enabling solvent saving and lowering the number of steps during the process
- High reachable selectivity; lowers the quantity of byproducts

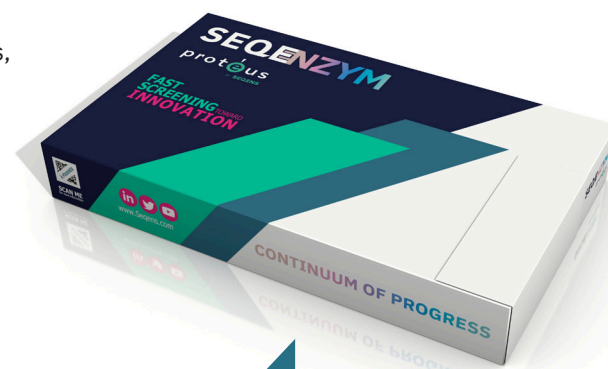
AVAILABLE ENZYMES:

Families	Chemical reaction	Number of Enzymes	Quantities/enzyme
Lipases-Esterases	$\text{R1-COOH} + \text{R2-OH} \xrightleftharpoons[\text{Hydrolysis}^*]{\text{Esterification}^*} \text{R1-COOR2}$ $\text{R1-COOR2} + \text{R3-OH} \xrightleftharpoons{\text{Transesterification}^*} \text{R1-COOR3} + \text{R2-OH}$ <p>*Can also be used for kinetic resolutions of racemic mixtures</p>	9	50 mg cell free extracts*
Transaminases + Amine Dehydrogenases	$\text{R1-CO-R2} + \text{NH}_2 \xrightleftharpoons{\text{Transamination}} \text{R1-CH(NH}_2\text{)-R2} + \text{C(=O)-R}$ $\text{R1-CO-R2} + \text{NH}_4^+ \xrightleftharpoons{\text{Reductive amination}} \text{R1-CH}_2\text{-R2}$	9 + 3	50 mg cell free extracts and cofactors*
Nitrilases	$\text{R1-CH(R2)-CN} \longrightarrow \text{R1-CH(R2)-COOH} + \text{R1-CH(R2)-NH}_2$	9	50 mg cell free extracts*
Alcohol Dehydroge- nases	$\text{R1-CO-R2} \rightleftharpoons \text{R1-CH(OH)-R2}$	10	50 mg cell free extracts and cofactors*
Epoxide Hydrolases	$\text{R1-CH(O)-R2} \longrightarrow \text{R1-CH(OH)-R2} + \text{R2-CH(OH)-R1}$	4	50 mg cell free extracts*
Dehalogenases	$\text{R1-CH(R2)-X} \longrightarrow \text{R1-CH(R2)-OH} + \text{HX}$	4	50 mg cell free extracts*
Ene reductases	$\text{R2-C(R3)=C(R1)-E} \longrightarrow \text{R2-CH(R3)-CH(R1)-E}$ <p>E= Electron Withdrawing Group like ketone, ester, aldehyde, nitro...</p>	8	50 mg cell free extracts and cofactors*

*To perform on average 5 assays per enzyme at 1 mL scale

EASY, FAST, INNOVATIVE

- 1**
Order your SEQENZYM KIT
 7 families of enzymes, around 60 enzymes available
- 2**
Try your SEQENZYM KIT
 Do a first screening quickly in your lab
- 3**
Get a HIT
 You got the desired product? It is a proof that the enzyme has recognized your substrate



ADVANTAGES OF OUR KITS

- ▬ Variety of chemical reactions
- ▬ Fast screening
- ▬ Standardized conditions
- ▬ High potentiality of performance improvement

GOT A HIT?

CONTACT US FOR FURTHER DEVELOPMENT AND OPTIMIZATION TO GET ALL THE BENEFITS OF ENZYMES

ABOUT PROTEUS BY SEQENS

Protéus is a world leader in protein engineering technologies, specialized in developing tailored enzymes. Protéus is a wholly owned subsidiary of Seqens Group.

In short :

- An exclusive and diversified strains collection (more than 7,000 including micro-algae and extremophiles)
- More than 1000 strains offering a pool of millions of enzymes (data mining)
- Patented directed evolution technologies (EvoSight™ & L-Shuffling™)
- A multidisciplinary skilled team dedicated to custom enzymatic processes fine tuning for all client's applications
- An expertise for bioprocesses development and scale-up
- Seqens group environment enabling production at large scale of chemicals including biocatalytic steps.

ABOUT SEQENS

Seqens is an integrated global leader in pharmaceutical synthesis and specialty ingredients, delivering custom-made products and solutions to its customers.

Seqens operates 24 industrial plants and 3 R&D centers in Europe, North America and Asia. More than 300 scientists, engineers and experts develop tailor-made solutions for its customers and ensure that products are successfully transferred into production.



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