

Lipase CLEA Discovery Platform

- Contains 7 lipase CLEAs
- Two sizes available
- Lipases immobilized as Cross-Linked Enzyme Aggregates



Our lipase CLEA Discovery Platforms are available in two sizes. A standard kit with 1 g of each CLEA and a large kit with 5 g of each. CLEAs of the following enzymes are present in the kit:

Candida antarctica Lipase A
Candida antarctica Lipase B
Candida rugosa Lipase
Thermomyces Lanuginosus lipase
Rhizomucor miehei Lipase
Pseudomonas stutzeri Lipase
Alcaligenes sp. Lipase

CLEA Methodology

Our proprietary methodology to immobilize enzymes as Cross-Linked Enzyme Aggregates (CLEAs) consists of covalent cross linking of precipitated enzymes. This efficient and economically attractive method yields immobilized biocatalysts that do not include support material and therefore have a very high activity per unit volume.

Product Properties

Product Type:	Immobilized form of lipases as a Cross-Linked Enzyme Aggregate (CLEA)
Formulation:	Powder or suspension
Enzyme Type:	Lipase, Triacylglycerol hydrolase, EC 3.1.1.3
Natural Reaction:	Hydrolysis of fats and oils

CLEA® is a registered trademark of CLEA Technologies BV.

Specific Product Specification

CLEA Discovery Platform

Applications

Lipases in general are used in a wide variety of applications in the fine chemistry, laundry and food industry. In organic synthesis they are used in the production of enantiopure alcohols, amines or acids via ester hydrolysis in aqueous media or via direct esterification in organic media.

Storage and Stability

The lipase CLEAs[®] are best stored in a cool and dry environment. Storage at 4 °C is recommended.

Formulations

Lipases in the platform have the following formulation and typical activity.

CaLA:	suspension	2.000 U/ml
CaLB:	powder	10.000 U/g
CrL:	powder	2.000 U/g
TLL:	powder	50.000 U/g
RmL:	powder	100.000 U/g
PsL	suspension	5000 U/ml
AL1	suspension	1000 U/ml

* 1 unit will catalyse the formation of 1µmol butyric acid from tributyrin at 40°C and pH 7.5

Pricing and Availability

The Lipase CLEA Discovery Platforms are available in two sizes. 1 gram of each in the standard kit and 5 g of each in the large kit. Please inquire for availability, lead times and prices.

CLEA1DP1: 1 g or 10 ml of liquid
CLEA1DP2: 5 g or 50 ml of liquid

References

1. Sheldon, Roger A; Sorgedragger, Menno; Janssen, Michiel H. A. **Use of Cross-linked Enzyme aggregates (CLEAs) for performing biotransformations.** Chimica oggi, Chemistry Today 2007, 25(1), 48-52.
2. Sheldon, R. A; Schoevaart, R; Van Langen, L.M. **Cross-linked enzyme aggregates (CLEAs): A novel and versatile method for enzyme immobilization (a review).** Biocatalysis and Biotransformation 2005, 23(3/4), 141-147.
3. Sheldon, Roger A; Schoevaart, R; van Langen, Luuk M. **CLEAs: An effective technique for enzyme immobilization.** Specialty Chem. 2003, July/August, 40-42.
4. Cao, Linqiu; van Langen, Luuk; Sheldon, Roger A. **Immobilised enzymes: carrier-bound or carrier-free?** Curr. Opin. Biotechnol. 2003, 14, 387-394.