CalB for Pharmaceutical Manufacturing

In partnership with Enginzyme, Almac support pharmaceutical manufacturers and CDMOs in evaluating, implementing, and scaling immobilised CalB based processes as a robust alternative to traditional chemical routes.

What it is

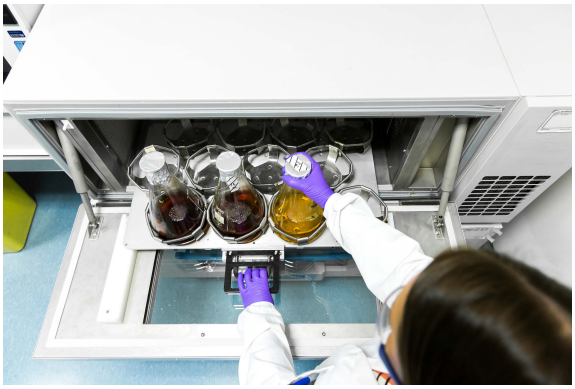
EziG®-CalB is an immobilized version of Candida antarctica lipase B. It's a versatile catalyst designed for efficient esterification, transesterification, and amidation reactions, offering high selectivity and stability across a range of applications. EziG®-CalB enables mild and clean processing; it minimizes by-products while ensuring consistent performance. It is, among other things, an ideal catalyst for sustainable cosmetic ingredient synthesis, where it can be applied to produce emollients and specialty esters.

Where it fits

- High selectivity esterification and transesterification under mild conditions.
- Stable immobilised format suitable for manufacturing and repeated batch operation.
- Reusability to reduce cost in use and improve process efficiency.
- Supports greener chemistry by reducing reliance on harsh chemical reagents.

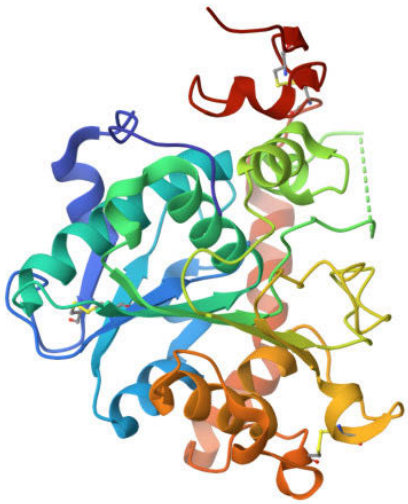
Performance highlights of EziG®-CalB

- >50% higher lipase activity and productivity versus incumbent formulations (example data).
- Designed for broad application in mixed hydrophobic/hydrophilic media.
- Mechanical strength and attrition resistance to support operational reuse.
- >99% conversion reported in esterification example data; consistent results across cycles.



Process advantages of EziG®-CalB

- Simplified downstream processing compared with conventional chemical esterification (e.g., recovery and packaging).
- Energy savings through milder process conditions.
- Further cost reductions through extended catalyst lifetime and reuse.
- Easy integration: processes can be adapted to existing infrastructure with zero to minimal CAPEX (where applicable).



Scale & availability

EziG®-CalB is available for laboratory evaluation and industrial scale trials. Supply considerations can be discussed based on your process and volume needs.

How Almac Sciences can support

- Feasibility discussions and route evaluation for CalB-enabled steps.
- Support for implementation, scaling, and integration into manufacturing workflows.