X-Zyme Biocatalyst Kits

Enzymes are biological molecules that catalyze chemical reactions. They are an important addition to the catalytic toolbox, especially in the production of fine chemicals and pharmaceuticals. The synthetic scope and catalytic activity of enzymes often complement chemical catalysis making biocatalysis a valuable tool in organic chemistry for the synthesis of chiral compounds.

Alfa Aesar is excited to offer the X-Zyme family of novel biocatalysts that complement the synthetic capabilities of our current offerings. Our new additions include 11 enzyme kits designed to help screen and identify reaction conditions for chiral synthesis. These enzyme kits are valuable resources for the fast development and establishment of asymmetric reduction processes. You now have one reliable resource for all your chemical and biocatalysis needs.

Item	Description	Application
J64194	Alcohol Dehydrogenase Kit - 35 variants	These enzymes asymmetrically reduce a broad range of carbonyl compounds including aldehydes, aliphatic, aromatic and cyclic ketones, diketones, ketoacetals and ketoesters. The enzymes carry out the reduction reactions to yield the corresponding chiral alcohols with high enantioselectivity.
J64628	Alcohol Dehydrogenase Kit - 12 variants	
J64713	Aldehyde Dehydrogenase Kit - 5 variants	Aldehyde Dehydrogenases catalyse the oxidation of aldehydes to their corresponding carboxylic acids with NAD+/NADP+ as cofactors. The enzymes act on a broad range of substrates including short- and long-chain aliphatic aldehydes and aromatic aldehydes.
J65717	Aldehyde Reductase Kit - 10 variants	Aldehyde Reductases catalyze the reduction of aldehydes to their corresponding primary alcohols with NADH/NADPH as cofactor. A broad range of aldehydes can be converted using these 10 enzymes.
J64957	Esterase Kit - 30 variants	Esterase is useful in the synthesis of optically active alcohols or carboxylic acids by ester hydrolysis. It also catalyzes the esterification of primary and secondary alcohols with short and long chain carboxylic acids and is able to catalyze the esterification of amino acids.
J65256	Esterase Kit - 50 variants	
J64732	Lipases Kit	Lipases catalyze the enantioselective hydrolysis of esters of primary alcohols.
J64291	Ene Reductase Kit - 8 variants	Ene Reductases perform asymmetric reduction of carbon-carbon double bonds in non-activated enoates. They also reduce double bonds in activated alkenes substituted with electron withdrawing groups such as α,β-unsaturated ketones, aldehydes, nitrile and nitro-derivatives, cyclic imides, and unsaturated carboxylic acids.
J64941	Transaminase Kit - 12 variants	Transaminases carry out asymmetric amino transfer to prochiral ketones yielding chiral amines.
J64306	Transaminase Kit - 20 variants	
J64535	Cofactor Recycling Enzymes Kit - 8 variants	The cofactor regeneration kit contains 8 enzymes that can regenerate NADPH and NADH. Contains 2 Malic decarboxylases, 2 Glucose Dehydrogenases, Alcohol Dehydrogenase, Phenylalanine Dehydrogenase, Formate Dehydrogenase, and Isocitrate Dehydrogenase.

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