

Aldolase (DERA)

Cat. No. DERA-15 **Lot. No.** (See product label)

SPECIFICATION

Product Overview

Description

DERAs: Can effectively catalyze the stereoselective addition of donor ketones to receptor aldehydes. Moreover, the reaction can be carried out in aqueous solution of neutral pH without special protective measures. They belong to class I aldolase, which forms Schiff base in the catalytic process. The substrate is covalently bonded with the amino group of the active site to initiate the breakage and formation of the bond. The difference between DERAs and other aldolases is that the substrates they catalyze are aldehydes and can undergo continuous aldehydes condensation. DERA is a useful tool to catalyze enantioselective carbon-carbon bond formation, generating up to two chiral centers under mild reaction conditions.

Applications

1. Normally, the reaction system should include substrate, buffer solution (optimum reaction pH) and the DERA. 2. All kinds of DERAs corresponding to various optimum reaction conditions should be studied individually. 3. The DERA should be added last into reaction system to maintain the activity. 4. High concentration Substrate or product with may inhibit DERA's activity. However, the inhibition can be relieved by batch addition of substrate.

Notes

Never contact with extreme conditions such as: high temperature, high/low pH and high concentration organic solvent.

Storage

Keep 2 years below -20 centigrade.

Advantages

1. Broad substrate spectrum. 2. High conversion. 3. Less by-products. 4. Mild

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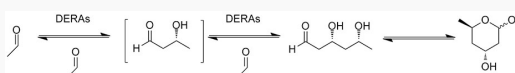
reaction conditions. 5. Environmentally friendly.

GENE INFORMATION

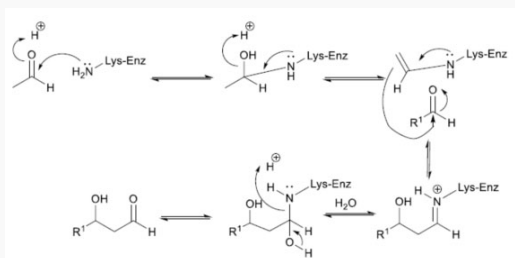
Official Symbol DERA

Synonyms Aldolase; DERA

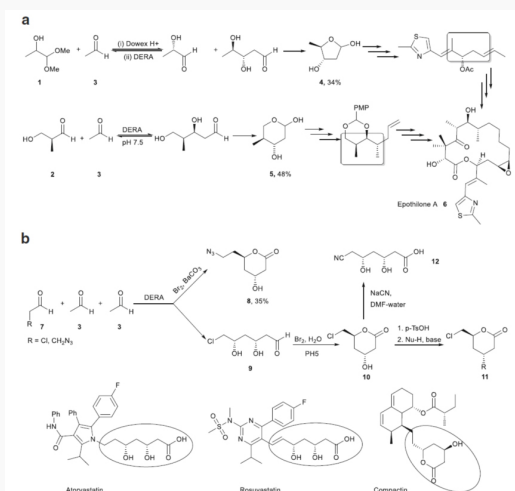
Catalytic reaction type



Catalytic mechanism



Application Examples



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