Ene reductase (ERED)

Cat. No. ERED-12 **Lot. No.** (See product label)

SPECIFICATION

Product Overview	
Description	EREDs: Belong to the family of old yellow enzymes that selectively reduce C=C in α, β -unsaturated compounds with electron-absorbing groups. They are widely used in the study of amino acid derivatives, bioactive substances, pharmaceutical intermediates, spices and chiral blocks. EREDs catalyze various substrate types because of wide spectrum of substrates. In general, the C=C of α, β -unsaturated compounds with electron-absorbing groups (including ketone aldehyde, nitro groups, carboxylic acids, esters, anhydride, lactones, imines, etc.) are easily reduced by EREDs, but the unactivated double bonds not.
Applications	1. Normally, the reaction system should include substrate, buffer solution (optimum reaction pH), coenzymes(NAD(H) or NADP(H)), coenzyme regeneration system(e.g. glucose and glucose dehydrogenase) and ERED. 2. All the EREDs can be tested respectively in the reaction system above or with the ERED Screening Kit. 3. All kinds of EREDs corresponding to various optimum reaction conditions should be studied individually. 4. High concentration Substrate or product with may inhibit ERED'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. High substrate specificity. 2. Strong chiral selectivity. 3. High conversion. 4. Less

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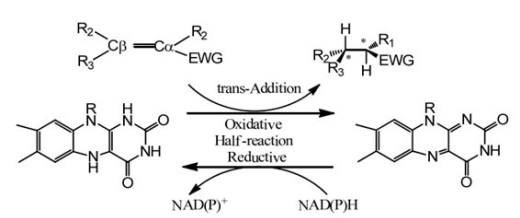
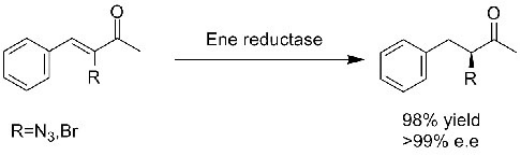
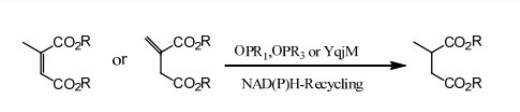
	by-products. 5. Mild reaction conditions. 6. Environmentally friendly. 7. High safety.

GENE INFORMATION

Official Symbol	ERED
Synonyms	Ene reductase; ERED
Catalytic mechanism	
Application Examples	 α,β-unsaturated aldehydes or ketones
Application Examples	 α,β-unsaturated carboxylic acids and their derivatives

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