Imine reductase (IRED)

Cat. No. IRED-25 **Lot. No.** (See product label)

SPECIFICATION

Product Overview	
Description	IRED: A class of enzymes that catalyze the reduction of C=N bond to C-N bond. It belongs to redox enzyme, with coenzyme NADPH for hydrogen transportation. According to the chiral preference of the products, they can be divided into R-IRED and S-IRED.
Applications	1. Normally, the reaction system should include substrate, buffer solution, enzyme, coenzyme, and coenzyme regeneration system. 2. All kinds of IREDs corresponding to various optimum reaction conditions should be studied individually. 3. High concentration Substrate or product with may inhibit IRED'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 by-products. 5. Mild reaction conditions. 6. Environmentally friendly.

GENE INFORMATION

Official Symbol	IRED

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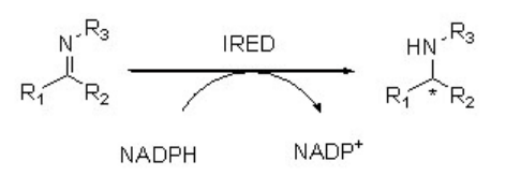
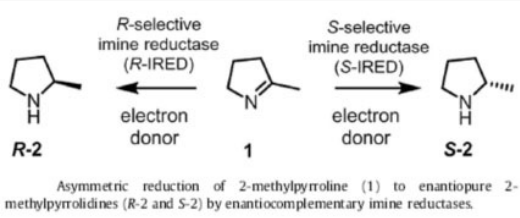
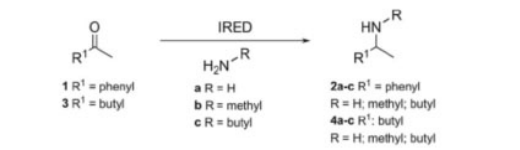
Synonyms	Imine reductase; IRED
Catalytic reaction type	
Application Examples	 Asymmetric reduction of 2-methylpyrroline (1) to enantiopure 2-methylpyrrolidines (*R*-2 and *S*-2) by enantiocomplementary imine reductases. Biosynthesis of chiral 2-methyl pyrrolidine
Application Examples	 Biosynthesis of secondary amine

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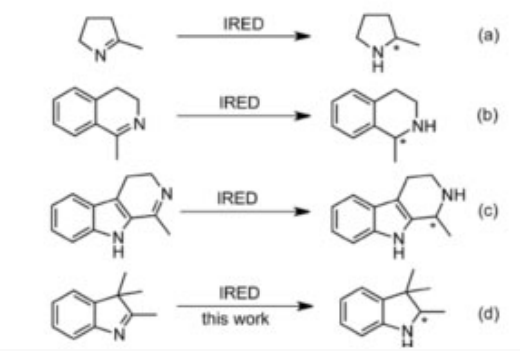
Application Examples	 Reduction of Cyclic Imines

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