

## Purification of $\beta$ -Keto Ester Reductase

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### Abstract

The biological activities of chiral compounds such as pharmaceuticals often depend on their configuration. Synthesis of enantiomerically pure products is often difficult and one of important subjects in organic synthesis.

Chiral hydroxy acid esters are useful building blocks in organic synthesis, especially in the preparation of natural products.

Microbial reduction could be involved in the stereoselective synthesis. However, use of whole microbial cells often do not produce chiral products of the desirable configuration in high enantiomeric excess. The control and optimization of the reduction process would be much easier to achieve using purified enzyme.

$\beta$ -Keto ester reductase was purified to electrophoretic homogeneity, and the subunit molecular mass was estimated to be 49 kDa. The optimum pH of the enzyme was 6.0. The enzyme activity was greatly inhibited by  $Hg^{2+}$  and  $Zn^{2+}$  ions. Kinetic constants for some substrates were determined. And some other molecular and catalytic properties will be presented.

### References

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