

Lactate Dehydrogenases

Lactate dehydrogenase is an oxidoreductase which catalyzes the conversion of lactate to pyruvate. It consists of 4 subunits which may be of 2 different types = M and H(»m uscle« and »h eart« formerly known as A and B respectively).

Five different isoenzymes are therefore possible, depending on the subunit composition:

- LDH-1 (H4)
- LDH-2 (H3M)
- LDH-3 (H2M2)
- LDH-4 (HM3)
- LDH-5 (M4)

LDH-1 and LDH-2 are predominant in heart, while LDH-4 and LDH-5 predominate in skeletal muscle and liver. The molecular weight of all isoenzymes is ca. 140 kDa.

We offer LDH from both heart and muscle sources.

L(+)-lactate dehydrogenase is specific for L(+)-lactate and does not react with D(-)-lactate.

LDH is used in coupled enzyme assays, for example in the determination of ATPase (1), myokinase (2) and pyruvate kinase (3,4). It may also be used in the determination of lactate (5), pyruvate (6) and various other metabolites.

References:

1. Penefsky, H. & Bruist, M. (1984) Methods of Enzymatic Analysis(Bergmeyer, H.U. ed.), 3rd Ed., Vol. 4, p. 324-8
2. Brolin, S.E. (1983) Methods of Enzymatic Analysis (Bergmeyer, H.U.ed.), 3rd Ed., Vol. 3, p. 540-5
3. H.U. ed.), 3rd Ed., Vol. 3, p. 496-507Fujii, H. & Miwa, S. (1983) Methods of Enzymatic Analysis (Bergmeyer,
4. Beutler, E. (1971) Red Cell Metabolism, A Manual of BiochemicalMethods, 56-68
5. Noll, F. (1984) Methods of Enzymatic Analysis (Bergmeyer, H.U. ed.),3rd Ed., Vol. 6, p. 582-8
6. Lamprecht, W. & Heinz, F. (1984) Methods of Enzymatic Analysis(Bergmeyer, H.U. ed.) 3rd Ed., Vol. 6, p. 555-61

Product Name	Cat.No.
Lactate dehydrogenase from bovine heart ca. 300 U/mg protein 2xcryst. suspension	27403
Lactate dehydrogenase from porcine heart min. 300 U/mg protein 2xcryst. suspension	27415
Lactate dehydrogenase from rabbit muscle ca. 550 U/mg protein 2 x cryst. suspension	27398