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Enzymatic and thermodynamic profiles of a heterotetramer lactate dehydrogenase isozyme in swine

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Short title

Characterization of LDH heterotetramer

Keywords

lactate dehydrogenase; heterotetrameric isozyme; K_m , V_{max} , van't Hoff enthalpy; hydroxychloroquine;

Highlights:

1. Heterotetrameric (H_2M_2) LDH isozyme was isolated from swine brain.
2. Kinetics of H_2M_2 were intermediate between the two homotetramers.
3. Thermodynamics of H_2M_2 were also intermediate between the two homotetramers.
4. Hydroxychloroquine inhibited more strongly H_2M_2 than homotetramers.

Abbreviations: H_2M_2 , heterotetrameric lactate dehydrogenase isozyme consisting of two *LDHA*-encoded muscle type and two *LDHB*-encoded heart muscle type molecules; HCQ, hydroxychloroquine; LDH, lactate dehydrogenase; T_{half} , residual activity of LDH pyruvate reduction activity; T_{max} , optimum temperature for LDH pyruvate reduction activity

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