L-Lactate Dehydrogenase A, human recombinant, expressed in *Escherichia coli*

Catalog Number SAE0049
Storage Temperature –20 °C

CAS RN 9001-60-9
EC 1.1.1.27
Synonyms: L-Lactic Dehydrogenase, LDH, LDHA, LDHM, L-LDH, (S)-Lactate: NAD+ oxidoreductase, LAD, LD.

**Product Description**

L-lactate dehydrogenase (LDH) is an enzyme that catalyzes the conversion of lactate to pyruvate. This is an important step in cellular energy production. Many different types of cells in the body contain this enzyme. Some of the organs relatively rich in LDH are the heart, kidney, liver, and muscle.

Cell death causes release of LDH from cells. Normal blood LDH levels vary with age, being higher in childhood due to bone growth. Nearly every type of cancer, as well as many other diseases, can cause elevated LDH levels. Therefore, this marker cannot be used to diagnose a particular type of cancer. LDH levels can be used to monitor treatment of some cancers, including testicular cancer, Ewing's sarcoma, non-Hodgkin's lymphoma, and some types of leukemia. Elevated LDH levels can be caused by a number of noncancerous conditions, including heart failure, hypothyroidism, anemia, and lung or liver disease.

In particular, lactic dehydrogenase A (LDHA) is mainly found in skeletal muscle, and for that reason is known as the M subunit. LDHA has been reported to have roles in such processes as aerobic and anaerobic glycolysis, gene transcription, regulation of channel complexes and of cell cycles, and brain development.

This product is recombinant human LDHA expressed in *E. coli* and has a predicted molecular mass of 37.5 kDa. The product is dissolved in a buffered solution containing 20 mM Tris-HCl, pH 7.5, with 150 mM NaCl and 10% glycerol.

Unit definition: One unit will convert 1.0 μmole of pyruvate to lactate per minute at pH 7.5 at 37 °C.

**Precautions and Disclaimer**

This product is for R&D use only, not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

**Storage/Stability**

Store the product at –20 °C. Repeated freezing and thawing is not recommended. Do not store in a frost-free freezer.

**References**