

#### DESCRIPTION

|                           |                                                                                                                                                                                                                                                                             |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b> | Human/Mouse/Rat                                                                                                                                                                                                                                                             |
| <b>Specificity</b>        | Detects human, mouse, and rat Lactate Dehydrogenase A/LDHA in Western blots and detects human Lactate Dehydrogenase A/LDHA in direct ELISAs. In direct ELISAs, approximately 20% cross-reactivity with recombinant human LDHB is observed.                                  |
| <b>Source</b>             | Polyclonal Sheep IgG                                                                                                                                                                                                                                                        |
| <b>Purification</b>       | Antigen Affinity-purified                                                                                                                                                                                                                                                   |
| <b>Immunogen</b>          | <i>E. coli</i> -derived recombinant human Lactate Dehydrogenase A/LDHA<br>Ala2-Val92<br>Accession # P00338                                                                                                                                                                  |
| <b>Conjugate</b>          | Alexa Fluor 405<br>Excitation Wavelength: 405 nm<br>Emission Wavelength: 421 nm                                                                                                                                                                                             |
| <b>Formulation</b>        | Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide<br><br>*Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions. |

#### APPLICATIONS

**Please Note:** Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

**Western Blot** Optimal dilution of this antibody should be experimentally determined.

#### PREPARATION AND STORAGE

**Shipping** The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.

**Stability & Storage** Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

#### BACKGROUND

LDHA (lactate dehydrogenase A chain; also LDH-M and PIG-19) is a 34-36 kDa member of the LDH family of enzymes. It is a part of a cytoplasmic complex that is found principally in hepatocytes and skeletal muscle. The LDHA complex catalyzes the conversion of pyruvate to lactate, thereby generating NAD, the final step in anaerobic glycolysis. This NAD is essential for the subsequent generation of ATP. Human LDHA is 332 amino acids (aa) in length. It contains an N-terminal coenzyme binding region, a central catalytic site, and at least nine utilized Lys acetylation and two Tyr phosphorylation sites. It also undergoes ISGylation where a 17 kDa product of the ISG15 gene is covalently attached to LDHA in a ubiquitin-like manner. LDHA forms tetramers composed of two dimers of varying composition. The tetramer may be homotetrameric (four monomers), or contain from one to three substitute LDHB monomers typically found in heart muscle. There are multiple splice variants. One possesses a five aa substitution for aa 237-332, a second contains a 45 aa substitution for aa 230-332, a third shows a deletion of aa 82-139, while a fourth utilizes an alternative start site 29 aa upstream of the standard site. Over aa 2-92, human LDHA shares 93% aa sequence identity with mouse LDHA.

#### PRODUCT SPECIFIC NOTICES

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