

Lactate Dehydrogenase C (LDHC) Active Protein | LDHC active protein

Active Lactate Dehydrogenase C (LDHC)

CATALOG # AAA161921	HOST E Coli	APPLICATIONS Activity Assay, Cell Culture
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PRODUCT SYNONYMS

Lactate Dehydrogenase C (LDHC); Active Lactate Dehydrogenase C (LDHC); Lactate Dehydrogenase C; LDH-C; CT32; LDHX; LDH3; Cancer/Testis Antigen 32; LDH testis subunit4; LDHC active protein

PRODUCT SPECIFICATIONS

Host	E Coli
Purity/Purification	Greater than 95% by SDS-PAGE
Form/Format	Freeze-dried powder; PBS, pH7.4, containing 0.01% SKL, 1mM DTT, 5% Trehalose and Proclin300.
Sequence	Met1~Leu33 2
Applicable Applications for LDHC active protein	Activity Assay, Cell Culture
Species	Rat
Expression System	Prokaryotic expression
Tag	N-terminal His Tag
Endotoxin Level	<1.0EU per 1ug (determined by the LAL method)
Isoelectric Point	8.1
Research Area	Enzyme & Kinase
Preparation and Storage	Store at 2-8 degree C for one month, -80 degree C for 12 months

IMAGES

Specific Activity (pmol/min/ug)=

Adjusted V_{max} (OD/min) x well volume (L) x 10^{12} pmol/mol

ext. coeff** ($M^{-1}cm^{-1}$) x path corr.*** (cm) x amount of enzyme (ug)

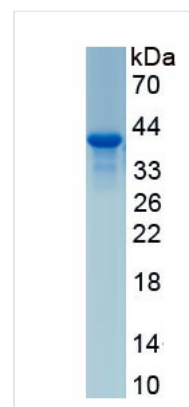
*Adjusted for Substrate Blank

**Using the extinction coefficient $6220 M^{-1}cm^{-1}$

***Using the path correction 0.320 cm

Bioactivity

A hallmark of most cancer cells is an altered metabolism involving a shift to aerobic glycolysis with lactate production coupled with a higher uptake of glucose as the main source of energy. Lactate dehydrogenase (LDH) is key to this shift by catalyzing the formation of lactate by reducing pyruvate with NADH, which also generates NAD() that is essential for the continuity of glycolysis. Inhibiting LDH activity has an anti-proliferative effect on cancer cells. It may reverse the resistance of tumor cells to conventional chemo- and radiotherapy. Recent research has renewed interest in LDH as an anticancer drug target. LDH enzymes have three homologous subunits LDHA, LDHB and LDHC. The activity of recombinant rat LDHC was measured by its ability to reduce pyruvate to lactate. The reaction was performed in 25 mM Tris, 100 mM NaCl, pH 7.5 (assay buffer), initiated by addition 50 uL of various concentrations of rrLDHC (diluted by assay buffer) to 50 uL of substrate mixture 1.6 mM beta-NADH and 4 mM sodium pyruvate. The final well serves as a negative control with no rrLDHC, replaced with 50 uL assay buffer. Read at a wavelength of 340 nm in kinetic mode for 5 minutes. The specific activity of recombinant rat LDHC is > 880 pmol/min/ug.



SDS-PAGE

Figure. SDS-PAGE

ADDITIONAL INFORMATION

Product Categories/Family for LDHC active protein	Active proteins
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NCBI AND UNIPROT INFORMATION

NCBI GI #	1170741
NCBI GeneID	29634
UniProt Accession #	P19629
Molecular Weight	35,687 Da
NCBI Official Full Name	L-lactate dehydrogenase C chain
NCBI Official Synonym Full Names	lactate dehydrogenase C
NCBI Official Symbol	Ldhc
NCBI Official Synonym Symbols	Ldh3
NCBI Protein Information	L-lactate dehydrogenase C chain; LDH-C; LDH-X; LDH testis subunit; lactate dehydrogenase C variant 3; lactate dehydrogenase 3, C chain, sperm specific
UniProt Protein Name	L-lactate dehydrogenase C chain
UniProt Gene Name	Ldhc
UniProt Synonym Gene Names	Ldh-3; Ldh3; LDH-C
UniProt Entry Name	LDHC_RAT

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/e-coli-active-protein/lactate-dehydrogenase-c-ldhc/161921>