

Lactate Dehydrogenase B / LDH-B Activity Assay ab140361

3 References 画像数 4

製品の概要

製品名	Lactate Dehydrogenase B / LDH-B Activity Assay			
検出方法	Colorimetric			
再現性	Intra-Assay (同時再現性)			

サンプル	N	平均値	SD	CV%
Overall	3			5%

Inter-Assay (日差再現性)				
サンプル	N	平均値	SD	CV%
Overall	4			5%

サンプルの種類	Cell culture supernatant, Serum, Plasma, Adherent cells, Tissue Extracts, Cell Lysate, Purified protein
アッセイタイプ	Enzyme activity
検出範囲	8 ng/ml - 500 ng/ml
添加回収試験	特定サンプルでの回収試験

サンプルの種類	平均 %	測定範囲
Serum	95	86% - 111%
Cell culture media	94	91% - 101%

種交差性	交差種: Goat, Cow, Human 非交差種: Mouse, Rat
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製品の概要

The microplate assay ab140361 is used to determine Lactate dehydrogenase B / LDH-B activity (LDHB) in a sample utilizing the immunocapture technique. The specific native LDHB enzyme is immune-captured within the wells of the microplate and activity is determined by following the production of NADH catalyzed by the enzyme. The generation of NADH is coupled to the 1:1 reduction of a reporter dye to yield a colored (yellow) reaction product whose concentration can be monitored by measuring the increase in absorbance at 450 nm (Dye molar extinction coefficient - 37000 M⁻¹ cm⁻¹). The immune-capture based activity assay kit contains all the required reagents for a fast and simple measurement of LDHB activity in a whole cell extract,

tissue homogenate, or serum.

特記事項

Functional lactate dehydrogenase are homo or hetero tetramers composed of M and H protein subunits encoded by the LDHA and LDHB genes, respectively. The major isozymes of skeletal muscle and liver has four muscle (M) subunits; while the main isozymes for heart muscle contains four (H) subunits. The other variants contain both types of subunits. Elevated levels of LDH indicate tissue breakdown in hemolysis. LDH can be used as a marker of myocardial infarction, peaking at days 3 and lasting through day 10. Other disorders indicated by elevated LDH include cancer, meningitis, encephalitis, acute pancreatitis, and HIV. Defects in LDHB are a cause of hereditary LDHB deficiency; however LDHB deficiency is usually asymptomatic.

試験プラットフォーム

Microplate reader

製品の特性

保存方法

Store at +4°C. Please refer to protocols.

内容	1 x 96 tests
100X Coupler	1 unit
100X NAD ⁺	1 unit
100X Reagent Dye	1 unit
10X Blocking Buffer	1 x 6ml
10X Buffer	1 x 25ml
1X LDH-B Control	1 x 1µg
Extraction Buffer (ab260490)	1 x 15ml
LDH-B Microplate	1 unit
Reaction Base Buffer	1 x 10ml

パスウェイ

Fermentation; pyruvate fermentation to lactate; (S)-lactate from pyruvate: step 1/1.

関連疾患

Note=Defects in LDHB result in deficiency of lactate dehydrogenase, a condition with no clear symptomatic consequences. Lactate dehydrogenase deficiency can probably be considered a non-disease.

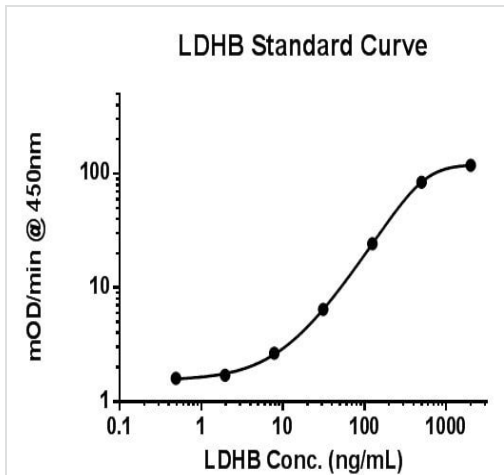
配列類似性

Belongs to the LDH/MDH superfamily. LDH family.

細胞内局在

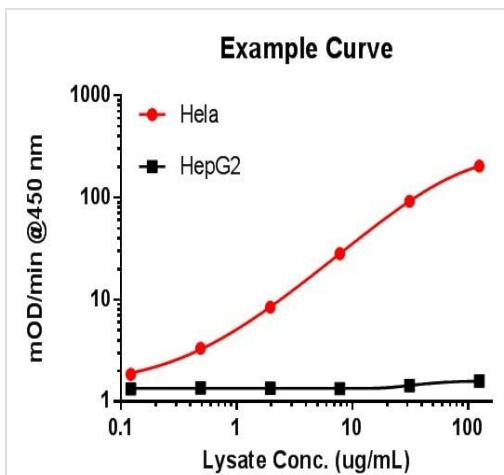
Cytoplasm.

画像



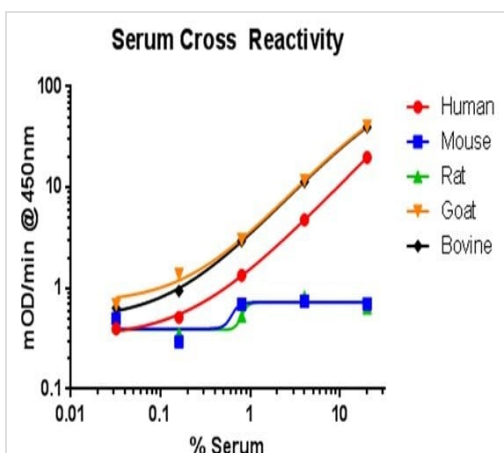
Example control standard curve

Example control standard curve generated using the method described in the protocol booklet.



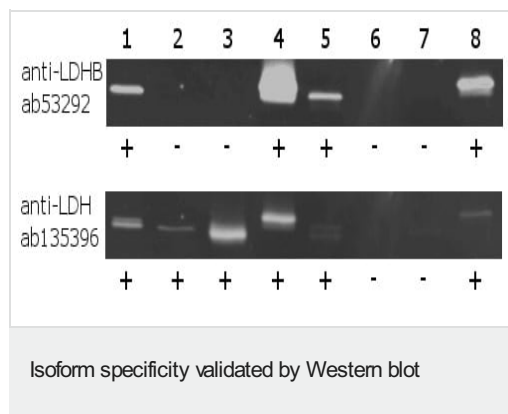
Lysate example curve

LDHB activity was measured from HeLa cell lysate, which contains hetero-tetramer isozyme composed of both (M) LDHA and (H) LDHB subunits. However, the liver derived cell line, HepG2, which contains mainly homo-tetramer of subunit M (LDHA), shows no enzymatic activity.



Species cross reactivity shown with sera

The species cross reactivity of this assay was demonstrated by testing the sera from multiple species. The kit shows a good reaction with human, goat and bovine samples, but shows no reaction with mouse or rat sera which may also contain LDHB. This species cross reaction specificity is due to the species specificity of the capture antibody.



Lane 1: HeLa cell lysate

Lane 2: HepG2 cell lysate

Lane 3: LDHA (purified from rabbit skeletal muscle)

Lane 4: LDHB (recombinant)

Lane 5: HeLa – In-well extracted with capture mAb

Lane 6: HepG2 – In-well extracted with capture mAb

Lane 7: LDHA – In-well extracted with a capture mAb

Lane 8: LDHB – In-well extracted with capture mAb

The western blot results indicate that the capture antibody isolates active LDHB, but does not isolate LDHA (which would be detected by the anti-LDH antibody).

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