Roar

Product Information

Roar LPL Activity Assay Kit, 200 assays

Lipoprotein Lipase Activity Assay Kit
Catalog no. RB-LPL2

Overview

LPL hydrolyzes triglycerides associated with lipoproteins, in particular VLDL and LDL.
The **Roar LPL Activity Assay Kit** contains a non-fluorescent substrate emulsion that becomes intensely fluorescent upon interaction with LPL, and a pre-hydrolyzed standard for converting the fluorescence intensity reading to moles of reactant formed. The assay is not specific for LPL and will also detect hepatic lipase activity. Available in two sizes: 200 assays (RB-LPL2) and 1000 assays (RB-LPL1K).

Kit Components

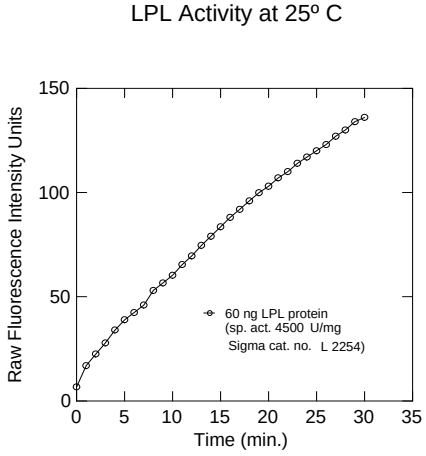
LPL Substrate Emulsion: 400µl. Store at 4°C.
LPL Standard Pre-hydrolyzed Substrate: 100µl. Store at 4°C.

Materials Required, But Not Supplied

Lipoprotein lipase source
Assay buffer: 150 mM NaCl, 10 mM Tris, 2 mM EDTA, pH 7.4
Fluorimeter with 370 nm Ex and 450 nm Em capability

Assay Method

1. Vortex substrate emulsion before use
2. Pre-mix substrate emulsion and assay buffer (150 mM NaCl, 10 mM Tris, 2 mM EDTA, pH 7.4) for all assays - use 1µl substrate with 200µl buffer
3. Distribute the mix among the wells or tubes
4. Add lipoprotein lipase source, incubate at 25°C - 37°C for 60 minutes
5. Read assay at 370 nm excitation / 450 nm emission



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Standardization

Compare the fluorescence intensity values from the samples assayed with the fluorescence intensity value of the included pre-hydrolyzed substrate.

Concentration: 75.7 μmoles/ml of pre-hydrolyzed substrate

Start by making a 1:2500 dilution of the standard in assay buffer and serially dilute to generate a standard curve. For some very sensitive instruments, you may have to further dilute (1:250000) the standard.

Cited References

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2. Kim, S. J., Nian, C. & McIntosh, C. H. Activation of lipoprotein lipase by glucose-dependent insulinotropic polypeptide in adipocytes. A role for a protein kinase B, LKB1, and AMP-activated protein kinase cascade. *J. Biol. Chem.* **282**, 8557-8567 (2007).

3. Kim, S. J., Nian, C. & McIntosh, C. H. Resistin is a key mediator of glucose-dependent insulinotropic polypeptide (GIP) stimulation of lipoprotein lipase (LPL) activity in adipocytes. *J. Biol. Chem.* (2007).

4. Qu, S. *et al*. Effects of apoA-V on HDL and VLDL metabolism in APOC3 transgenic mice. *J. Lipid Res.* **48**, 1476-1487 (2007).

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7. Altomonte, J. *et al*. Foxo1 mediates insulin action on apoC-III and triglyceride metabolism. *J. Clin. Invest.* **114**, 1493-1503 (2004).

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LPL Activity Kit

Lipoprotein Lipase Activity Kit

Overview - LPL hydrolyzes triglycerides associated with lipoproteins, in particular VLDL and LDL. The LPL Activity Kit includes a non-fluorescent substrate emulsion that becomes intensely fluorescent upon interaction with LPL.

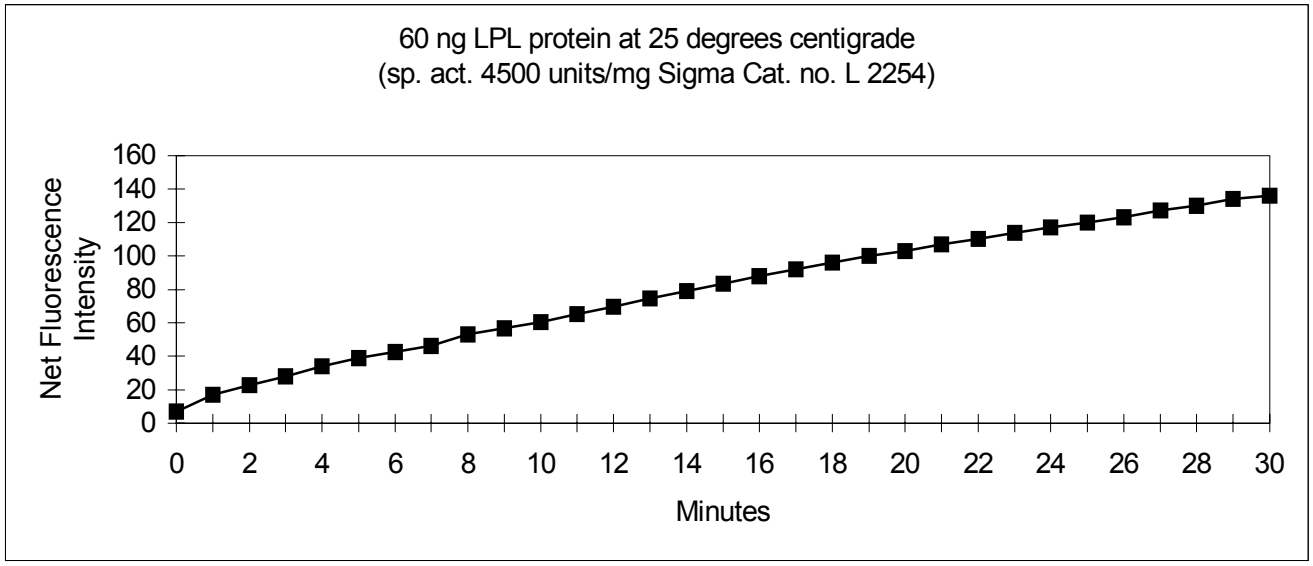
METHOD:

Thoroughly mix substrate emulsion before use.

Add 2 µl of substrate emulsion to 400 µl of 10 mM tris / 150 mM NaCl / 2 mM EDTA / pH 7.4.

Add lipoprotein lipase source (SIGMA #L 2254).

Read assay at 370nm excitation, 450 nm emission.



FOR RESEARCH USE ONLY

Ordering Information:

LPL Activity Kit – 200 assays – cat. #RB-LPL2

LPL Activity Kit – 1000 assays – cat. #RB-LPL1K

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