What is Apolipoprotein B-48 (Apo B-48)?

Apolipoprotein B-48 is a specific structural protein in lipoproteins derived from the small intestine, such as chylomicron (CM) and chylomicron remnants. Since one role of CM is to transfer exogenous lipids derived from food to the liver or peripheral tissues, the measurement of Apo B-48 is considered a best marker for observation of exogenous lipid transportation after food intake.

Point
- Changes in exogenous and endogenous cholesterol can be analyzed by measuring LDL cholesterol, HDL cholesterol, and Apo-B48 of the same sample (ref. 2).
- Fasting Apo B-48 level may be a marker of postprandial hyperlipidemia (ref. 9).
- Fasting Apo B-48 level is known to be useful for the evaluation of risks for developing atherosclerotic diseases: peripheral arterial disease (PAD), cardiovascular disease, and vascular endothelial dysfunction.
- It is also considered useful for the evaluation of CM remnants that have been implicated as a cause of atherosclerosis in the cardiovascular system.
Apo B-48 is a structural protein specific to Chylomicron and useful for observation of exogenous lipid transportation derived from food.

**Changes in postprandial TG, Apo B-48, and Total Apo B**

- **TG**
  - 6 healthy men and 6 healthy women, 39 to 60 years old (Mean 52 years old).
  - After 12-hour fasting
  - Loading of oral OFTT cream (17 g/m²)

- **Apo B-48**
  - N.S.
  - P<0.02

- **Apo B**
  - 0.0
  - 0.5

**Comparison of Apo B-48 and Apo B-100 between the administration of Fluvastatin only and Fluvastatin + Omega-3 fatty acid**

- Omega 3 fatty acids induce a marked reduction of Apo B-48 when added to fluvastatin in patients with type 2 diabetes and mixed hyperlipidemia.

**Easily evaluate dietary response by observing Apo B-48**

Valdivielso, P. et al. Cardiovasc Diabetol, 8:81, Jan 2009 (ref. 1)
Utilize Rabbit Apo B-48 ELISA for translational research on hyperlipidemia or arteriosclerosis.

Fluctuation of Apo B-48, Triglyceride, and Cholesterol in blood after administration of Ezetimibe

Rabbit: NZW, Male, 10-Week-old, body weight 2.5 to 3.0 kg
High-fat diet
[Day 1] High-fat diet
[Day 8] Divided into 2 groups
● Control group: Saline 3 ml, n=3
■ Ezetimibe group: Oral administration 0.6 mg/kg/day, Saline 3 ml, n=3

Although significant reduction was not confirmed with TG and Cho, Apo B-48 significantly was reduced.

Rabbit Apo B-48 ELISA Kit

References

1. Omega 3 fatty acids induce a marked reduction of apolipoprotein B48 when added to fluvastatin in patients with type 2 diabetes and mixed hyperlipidemia. Valdivielso, P., Rioja, J., Garcia-Arias, C., Sanchez-Chaparro, MA., Gonzalez-Santos, P., Cardiovasc Diabetol, 8:8, Jan 2009.


Code/Product name/Measurement range/Price (96 well/kit)

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<thead>
<tr>
<th>Wako code</th>
<th>Product name</th>
<th>Measurement range</th>
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<tr>
<td>637-10641</td>
<td>LBIS Human Apo B-48 ELISA Kit</td>
<td>2.5 - 160 ng/ml</td>
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<td>622-04909</td>
<td>LBIS Rabbit Apo B-48 ELISA Kit</td>
<td>19.5 - 1,250 ng/ml</td>
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▲ Caution for safety

- The products on the brochure are research reagents. Please use only for the purpose of research. Do not use for the purpose of diagnosis or treatment.
- Keep the product in a cool dark place and use it by the expiration date.
- Use properly after reading the instructions thoroughly.
- Since the product contains sulfuric acid, be sure to handle it carefully.
- Follow the waste disposal guidelines of your institution after use.

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