Total OXPHOS Rodent WB Antibody Cocktail ab110413

Overview

Product name: Total OXPHOS Rodent WB Antibody Cocktail
Assay type: Quantitative
Species reactivity: Reacts with: Mouse, Rat, Cow, Human, Cynomolgus monkey
Product overview: ab110413 is an optimized cocktail of high quality antibodies for analyzing relative levels of OXPHOS complexes in rat or mouse mitochondria by western blot.

ab110413 contains 5 mouse mAbs, one each against CI subunit NDUFB8 (ab110242), CII-30kDa (ab14714), CIII-Core protein 2 (ab14745) CIV subunit I (ab14705) and CV alpha subunit (ab14748) as an optimized premixed cocktail. The kit is suitable for Western Blotting analysis of the relative levels of the 5 OXPHOS complexes in mitochondrial preparations from mouse, rat, human, or bovine sources.

Altered levels of assembly can arise from mutations in individual subunits, mutations in assembly factors for the complex(es), mtDNA depletion or as a result of physiological and or pathological changes e.g. hormone treatment, exercise, diet or oxidative stress.

The mAbs in the cocktail were chosen because they are against a subunit that is labile when its complex is not assembled. Moreover, the combination is readily resolved in SDS-PAGE when the appropriate gel conditions are used (see protocols). Note: Mouse tissue samples can easily be contaminated with antibodies from the animal’s blood. To avoid such background bands, use ab110413 in conjunction with an anti-mouse secondary against native antibodies. Also, COXI is a highly hydrophobic protein and appears as a broad band at ~35 kDa (not at its true molecular weight at 57 kDa). It is very sensitive to heating. Therefore, the samples, including the positive control, should not be heated over 50°C before loaded on the gel.

The Western blot cocktail is supplied at a concentration of 1.5 mg/mL.

We recommend using a high pH CAPS / PVDF transfer protocol when using this antibody for Western blot. Please contact us for more details.

Review our Metabolism Assay Guide to learn about assays for metabolites, metabolic enzymes, mitochondrial function, and oxidative stress, and also about how to assay metabolic function in live cells using your plate reader.

Tested applications

Suitable for: WB
Properties

Storage instructions
Store at -80°C. Please refer to protocols.

<table>
<thead>
<tr>
<th>Components</th>
<th>300 µg</th>
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<tbody>
<tr>
<td>Cocktail of 5 Antibodies</td>
<td>1 x 300µg</td>
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<tr>
<td>Rat Heart Mitochondria Western Blot Control</td>
<td>1 x 50µg</td>
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Applications

Our Abpromise guarantee covers the use of ab110413 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

<table>
<thead>
<tr>
<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
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<tr>
<td>WB</td>
<td>Use at an assay dependent concentration. The antibody cocktail (1.5 mg/mL) should be diluted 250x to a final working concentration of 6.0 µg/mL for Western blotting. We recommend using PBS with 1% milk as the antibody diluent. Store the antibody cocktail at 4°C and the control sample at -80°C. We recommend using a high pH CAPS / PVDF transfer protocol when using this antibody for Western blot. Please contact us for more details.</td>
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Images

Figure 1. Rat liver mitochondria labeled with ab110413 (MS604). The sample in lane 1 was kept at room temperature, whereas the remaining three samples were heated to 37°C, 50°C, and 100°C, respectively. This blot shows that boiling of samples leads to a decrease in signal due to aggregation of proteins therefore heating samples at or close to boiling is not recommended.

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