Gold Conjugation Kit (40nm, 20 OD) ab154873

Overview

**Product name**
Gold Conjugation Kit (40nm, 20 OD)

**Product overview**
Abcam’s Gold Conjugation Kit allows antibodies or proteins to be covalently attached to ultra-stable Gold nanoparticles at very high OD quickly and easily. The nanoparticles in the Abcam’s Gold Conjugation Kit have a protective surface coat that can withstand the most extreme conditions (e.g. 2.5M NaOH at 70°C for > 1 hour). The hands-on time for the Abcam Gold conjugation procedure is around 2 minutes and the conjugate is ready to use within 20 minutes. The researcher simply pipettes the biomolecule into a vial containing the nanoparticles of the Gold Conjugation Kit.

The nanoparticles in this kit are supplied as a freeze-dried mixture. The conjugation reaction is initiated simply by reconstituting the freeze-dried nanoparticles with the antibody, which becomes attached (through lysine residues) to the surface of the nanoparticles.

The resulting covalent conjugates are more stable than those prepared by passive adsorption methods. Moreover, unlike passive methods, the coating process is independent of the isoelectric point of the antibody, avoiding the need for extensive trials at different pH values. All antibodies can be labelled at a single pH.

Learn more about buffer compatibility, protein/secondary antibody conjugation and labeling chemistry in our FAQs.

**Benefits**

- **Easy and rapid conjugation** – only 2 minutes hands-on time and 100% recovery of materials
- **Site-specific labelling** – Antigen binding sites of antibodies are free to bind the target molecule
- **Proprietary surface coating** prevents metal-protein interactions, and enables covalent attachment to the Gold – Stable conjugates formed
- **Fully scalable** – Easy transfer from R&D to manufacturing
- **Uniform spherical shape and narrow size distribution** – Consistent high quality and excellent
Batch-to-batch reproducibility

Buffer requirements:

The biomolecule to be conjugated should ideally be in 10 mM amine-free buffer (e.g. MES, MOPS, HEPES), pH range 6.5 to 8.5. Sugars have no effect on conjugation efficiency. For incompatible buffers and low antibody concentrations, use our rapid antibody purification and concentration kits for Nanoparticles. To learn more about incompatible buffers, please refer to the protocol booklet.

Notes

This product is manufactured by Expedeon, an Abcam company, and was previously called 40nm InnovaCoat® GOLD. 230-0010 is the same as the 10 x 1 µg size. 230-0015 is the same as the 1 x 10 µg size. 230-0005 is the same as the 3 x 1 µg size.

The 3 and 10 Test Conjugation Kits are designed to label 12 µl of antibody per vial.
The 1 Test Conjugation Kit is designed to label 120 µl of antibody per vial.

Properties

Storage instructions

Store at -20°C. Please refer to protocols.

<table>
<thead>
<tr>
<th>Components</th>
<th>3 x 1 µg</th>
<th>10 x 1 µg</th>
<th>1 x 10 µg</th>
<th>3 tests</th>
<th>10 tests</th>
<th>1 tests</th>
</tr>
</thead>
<tbody>
<tr>
<td>ab273949 - Gold 40nm</td>
<td>3 x 1µg</td>
<td>10 x 1µg</td>
<td>1 x 1µg</td>
<td>3 x 1µg</td>
<td>10 x 1µg</td>
<td>1 x 1µg</td>
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<tr>
<td>ab273943 - Gold Antibody Diluent</td>
<td>1 x 1ml</td>
<td>1 x 4ml</td>
<td>1 x 4ml</td>
<td>1 x 1ml</td>
<td>1 x 4ml</td>
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<tr>
<td>ab273942 - Gold Quencher Reagent</td>
<td>1 x 700µl</td>
<td>1 x 700µl</td>
<td>1 x 700µl</td>
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<tr>
<td>ab273941 - Gold Reaction Buffer</td>
<td>1 x 750µl</td>
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<td>1 x 750µl</td>
<td>1 x 750µl</td>
<td>1 x 750µl</td>
<td>1 x 750µl</td>
</tr>
</tbody>
</table>

Images

Antibody conjugation using the Gold Conjugation Kit vs traditional gold nanoparticle passive absorption techniques with uncoated gold nanoparticles, showing both enhanced signal intensity and improved specificity. 40 nm Gold particles were labeled with anti-IgA antibody and used to measure IgA concentration in a lateral flow inhibition assay, with IgA bound to a lateral flow strip.
Please see the protocol booklet for a detailed method.

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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