abcam

Product datasheet

Gold Conjugation Kit (40nm, 20 OD) ab154873

16 References 5 图像

概述

产品名称 Gold偶联试剂盒(40nm, 20 OD)

产品概述 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.

说明

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.

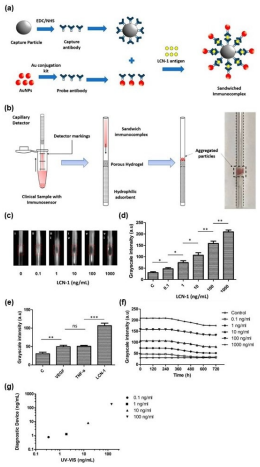
性能

存放说明

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

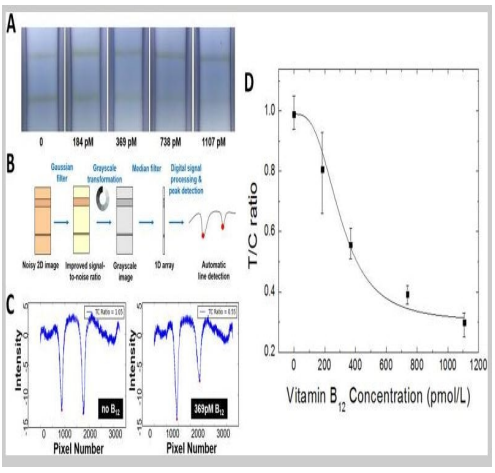
组件	3 x 1 µg	10 x 1 µg	1 x 10 µg
ab273949 - Gold 40nm	3 x 1µg	10 x 1µg	1 x 10µg
ab273943 - Gold Antibody Diluent	1 x 1ml	1 x 4ml	1 x 4ml
Gold Quencher Reagent	1 x 700µl	1 x 700µl	1 x 700µl
Gold Reaction Buffer	1 x 750µl	1 x 750µl	1 x 750µl

图片



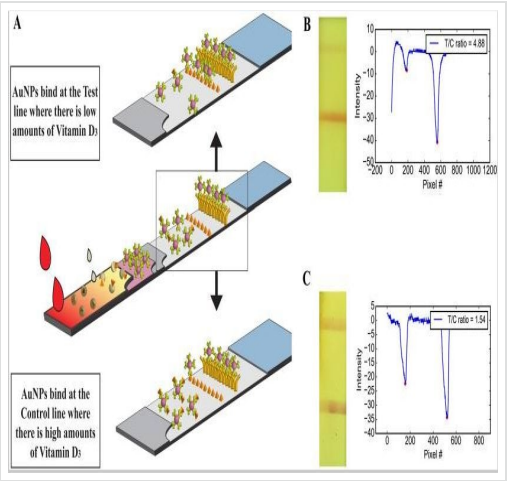
Conjugation - Gold Conjugation Kit (40nm, 20 OD) (ab154873)

Guzman, John Mello Camille C., Sheng-Min Hsu, and Han-Sheng Chuang used Gold Conjugation Kit (40nm, 20 OD) (ab154873) as part of developping a colorimetric diagnostic capillary device for the rapid detection of biomarkers. They used the kit to conjugate Gold to probe rabbit polyclonal anti-LCN antibody for use in the device.
(a) Illustrations for preparing sandwiched immunocomplex and detection process. (b) Sandwiched immunocomplex detection process. (c-g) Quantitative assessment of the detection platform: (c) grayscale images of diagnostic tool inside the detection box; (d) calibration of the grayscale intensity of sandwiched immunocomplex with respect to different lipocalin-1 (LCN-1) concentrations ranging from 100 pg/mL to 1 µg/mL; (e) binding specificity of the capture and probe particles in the presence of different antigens; (f) binding stability of sandwiched immunocomplex with respect to different times; (g) reliability of the detection platform. Comparison of LCN-1 concentration detection results between the proposed diagnostic tool and spectrophotometer. The symbols "*", "**", "***", "ns" denote $p < 0.05$, $p < 0.01$, $p < 0.001$, and $p > 0.05$, respectively, under student's t test (n = 5). The error bars represent standard deviation.



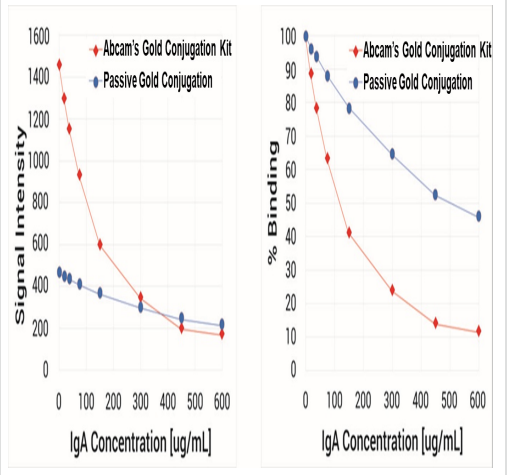
Lateral flow assay - Gold Conjugation Kit (40nm, 20 OD) (ab154873)

Lee, Seoho, et al used Gold Conjugation Kit (40nm, 20 OD) (ab154873) as part of examining low-cost point-of-care quantification of vitamin B_{12} concentrations. They used the kit to conjugate Gold to anti-vitamin B_{12} IgG for use in competitive lateral flow assay.
(A) Colorimetric variation of the test and control line regions on the silver enhanced B_{12} lateral flow test strip at different known concentrations of standard vitamin B_{12} samples (B) image processing algorithm used by the NutriPhone platform (C) Test and control line signals detected by the NutriPhone app as local intensity minima for 0 and 369 pmol/L of B_{12} standard samples (D) Calibration curve showing the T/C ratios of the colorimetric signals at different standard B_{12} concentrations.



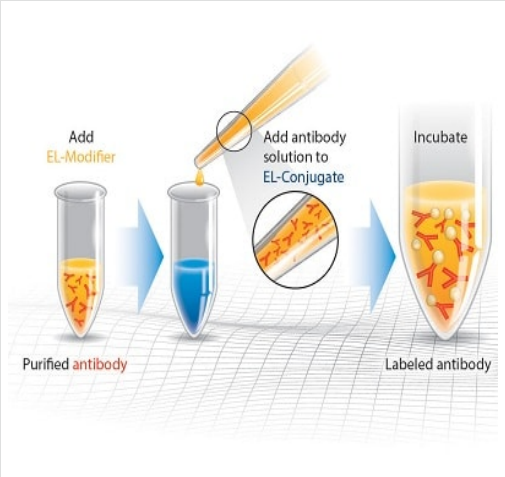
Lateral flow assay - Gold Conjugation Kit (40nm, 20 OD) (ab154873)

Vemulapati, S., et al used Gold Conjugation Kit (40nm, 20 OD) (ab154873) as part of examining vitamin D3 Deficiency. They used the kit to conjugate Gold to monoclonal anti-25(OH)D3 IgG antibody for use in lateral flow assay.
Vitamin D3 Lateral Flow Assay. (A) Image and schematic of the 25(OH)D3 strip architecture and components. (B) Image and intensity plot of a participant with low Vitamin D3 and high T/C ratio (C) Image and intensity plot of a participant with healthy levels of 25(OH)D3 and low T/C ratio.



Lateral flow data – Gold Conjugation Kit vs traditional gold nanoparticle passive absorption techniques

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.



GOLD Conjugation Kit (40nm, 20 OD)

Please see the protocol booklet for a detailed method.

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