For highly sensitive detection - Gold Nanoplates Methods for preparing antibody conjugates

- By conjugating functional substances such as antibodies with gold nanoplates, they can be used as detection color materials.
- Conjugates can be easily prepared by simply mixing a gold nanoplate dispersion with a functional protein such as an antibody.



Three features of antibody conjugation



Application Examples

Because "Conjugated gold nanoplates" can recognize antigens, it is useful in various biochemical experiments, including as an immunochromatographic colorant.





Methods for preparing antibody conjugates(Next) \Rightarrow

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Methods for preparing antibody conjugates

STEP1,2: The optimal conditions are evaluated based on changes in the spectroscopic spectrum when the antibody (2) or NaCl (3) is added.

- **STEP 3** : The antibody is conjugated based on the optimal conditions determined in STEP 1 and 2. **STEP 3** : The purification conditions can be evaluated by comparing the spectroscopic spectrum
- STEP 3 : The purification conditions can be evaluated by comparing the spectroscopic spectrum before and after centrifugation.

1. Experimental Method



2. Measurement and evaluation methods





When an antibody is conjugated onto a gold nanoplate, the maximum absorption wavelength (λ_{Max}) shifts to the longer wavelength side due to changes in surface plasmon.



Wavelength /nm

Figure.2:Spectral changes under optimal and not-optimal conditions

If aggregation occurs due to inappropriate pH or antibody amounts, the peak will be gentler and the degree of aggregation (O.D. $\lambda_{\text{Max}}/\text{O.D.750}$) will be higher.

<Not-optimal>

Long wavelength shift cannot be observed
The maximum absorbance is significantly decreased

Contact address If you have any questions, please feel free to contact us at the address below!

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