



Albumin - 10 nm Colloidal Gold Labeled

Product No. **A5179**

Lot 023H8255

Product Information

General Guidelines for Usage

Product should be diluted for most applications. It is recommended that diluent buffer contain 0.15 M saline buffered at pH 6 to 8, plus 0.5% albumin (A-7638) and 0.05% Tween 20 to minimize background (additional buffer supplement may be required for certain applications e.g., see "dot blot" diluent). Optimum concentration of the conjugate must be determined empirically dependent on specific usage and generally may range from final $A_{520} = 1.0$ to 0.05 (1:5-1:100 dilution) with incubation times ranging from 30 min to 12 hr.

Product Profile

Particle Size Distribution by transmission electron microscopy (n = 100)

Mean Particle Size	9.6 nm
Standard Deviation	0.9 nm
Coefficient of Variation	9.0 %

Spectrophotometric Data (1 cm light path, H₂O as blank)

λ max	524 nm
A_{520}	5.4
.01% Au	
E_{520}	3.3

Particle Concentration¹

Particles per ml	1.8×10^{13}
Particles per A_{520} per ml	3.4×10^{12}

Protein Concentration based on estimation of protein required to stabilize gold.

Mg protein per ml	0.25
Mg protein per particle	1.4×10^{-14}

Binding Activity

Detects 17 ng Anti-bovine serum albumin (Sigma Prod. No. B7276).

Binding is evaluated by a "dot blot" assay modified from the method of Brada and Roth². Serial dilutions are prepared from a 1 mg/ml positive control protein solution. One micro-liter (1 μ l) of each solution is adsorbed onto a nitrocellulose membrane and allowed to dry. The gold conjugate is diluted to $A_{520} = 0.25$ (approx. 1:20) with 0.15 M NaCl, 0.01 M sodium phosphate, pH 7, 5 mg/ml Ovalbumin, and 0.05% TWEEN 20. The spotted membranes are incubated with the gold for 1 hr. at 25 °C. The detection limit is the minimum amount of protein that can be detected as a pink-red spot on the membrane.

References

1. Ackerman, G.A., et al., J. Histochem. Cytochem., 31, 433 (1983).
2. Brada, D. and Roth, J., Anal. Biochem., 142, 79 (1984).
3. Benhamou, N., J. Electr. Micr. Tech., 12, 1 (1989)

Suggested review: Roth, J., Techniques in Immunocytochemistry, Vol 2, G.R. Bullock and P. Petrusz, Eds., Academic Press, New York, p 217-284 (1983).

Storage

Product may be stored for extended periods as packaged (undiluted) at -20 °C. Diluted samples should not be stored below 0 °C as freezing may cause aggregation of the colloid.

Pcs11/99