ProductInformation

Anti-Goat IgG (whole molecule)
Gold Conjugate, 10nm
Antibody Developed in Rabbit
Affinity Isolated Antigen Specific Antibody
Adsorbed with Human Serum Proteins

Product No. **G5527**
Lot 027H0070

Product Description
Antiserum is developed in rabbit using goat IgG purified from normal goat serum as the immunogen. The antibody is isolated by immunospecific methods of purification to remove essentially all rabbit serum proteins, including immunoglobulins which do not specifically bind to goat IgG. To minimize cross reactivity with human proteins the antibody preparation is adsorbed with human serum proteins, prior to conjugation. The affinity isolated specific antibody is conjugated to 10 nm gold particles, the excess antibody is then removed.

Cross-reactivity of the conjugate is determined by Dot Blot Assay (DBA). The antibody shows less than 0.1% cross-reactivity with human IgG.

Reagents
The conjugate is provided as colloidal suspension in 0.02 M Tris buffered saline, pH 8.0, with 20% glycerol and 1% BSA as stabilizers, containing 0.05% sodium azide (see MSDS)* as a preservative.

Precautions
*Due to the sodium azide content a material safety data sheet (MSDS) for this product has been sent to the attention of the safety officer of your institution. Consult the MSDS for information regarding hazards and safe handling practices.

Binding Activity
Binding activity is determined using a modification of the dot blot assay of Brada and Roth.[1] In this assay a 1 mg/ml solution of goat IgG is serially diluted in phosphate buffered saline, 1 µl of each dilution is then applied to nitrocellulose paper. Binding activity is defined as the minimum amount of goat IgG detectable as a visible pink-red spot after a 1 hour incubation with the gold conjugate diluted to an A_{520} of 0.25.

Detects 16 ng goat IgG

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

Mean Particle Diameter 11.1 nm
Standard Deviation 1.05
Coefficient of Variation 9.5%

Particle Concentration[2]
Particles/ml 7.7×10^{12}
Particles/A_{520}/ml 3.3×10^{12}

Spectrophotometric Data
(1 cm lightpath, deionized H_2O as blank)

λmax 521
A_{520} 2.4
$E^{1\%}_{520}$ 2.3

Clustering Data
% Singlets 77
% Doublets 23
% Triplets 0

Relative order of singlets, doublets,triplets or greater: Singlets>Doublets>Triplets.
Clustering data determined by floating the electron microscopy (EM) nickel grid on conjuate diluted 1:100 in Tris buffer, pH 8.0, containing 1% BSA, for 30-60 minutes. The grid is evaluated by EM after drying. One hundred particles are scanned to determine clustering.

General Guidelines for Usage
The conjugate should be diluted for most applications, using 0.5 M NaCl, buffered at pH 6 to 8, containing 0.1% BSA, 0.05% Tween 20 and 5% fetal bovine serum to minimize background staining. For any given application, the optimum concentration of the conjugate must be determined experimentally. For most applications the final A_{520} may range from 1.0 to 0.05 (1:5-1:100 dilution) with incubation times in the range of 30 minutes to 12 hours.[3]

Storage
Store at 2-8ºC

.**References**
1. Brada, D. and Roth, J., Anal. Biochem., **142**, 79 (1984).
2. Ackerman, G.A., et al., J. Histochem., Cyto chem., **31**, 433 (1983).
3. Hsu, Y-H., Anal Biochem., **142**, 221 (1984).