

## PRODUCT DATA SHEET

### Protein G - 20nm Silver Conjugate (1ml)

**Catalog No.** SC-20-18      **Size:** 1ml

#### Description

Protein G coupled to 20nm silver nanoparticles. Suitable for use in immunoblotting, light microscopy, and electron microscopy applications.

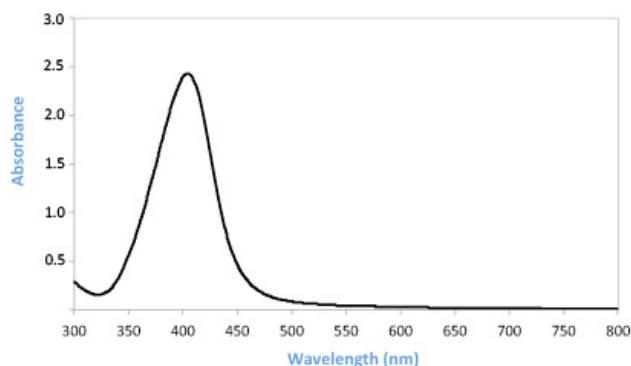
Provides a permanent and sensitive label (100pg or less) when used in conjunction with Cytodiagnosics membrane and microscopy silver enhancer kits, see related product below.

**Concentration:** 0.06 mg/ml (OD=7.5)

**Conjugated Protein:** Protein G from *Streptococcus sp.* (recombinant, expressed in *E. coli*)

**Storage Buffer:** 10mM PBS (pH 7.4), 20% glycerol (v/v), 1% BSA

**Working Dilution:** 1:10 – 1:50



#### Storage

Store undiluted in storage buffer at 2-8° C. Stable for at least 2 months if stored as specified.

#### Product Safety and Handling

This product is for R&D use only, not for drug, household, or other uses. Please review the material safety datasheet (MSDS) available online for proper safety and handling procedures.

#### Related Products

Silver Enhancer Kit for Membranes    Cat No. SR-01-02

Silver Enhancer Kit for Microscopy    Cat No. SR-01-01

#### Standard Immuno Dot-Blot Protocol

(Adapted from Moeremans et al. [1])

1. Spot one microlitre drops of a serial dilution of your protein (100-0.1ng) in PBS supplemented with 50ug/ml of BSA on nitrocellulose or PVDF membrane.
2. Let protein drops dry into the membrane.
3. Block Membrane for 30 minutes using 1% (w/v) dry milk in 1X PBS at room temperature.
4. Incubate with primary antibody for 2 hours at room temperature.
5. Wash membrane 3x5 minutes with blocking solution prepared as above.
6. Incubate for 2 hours (or longer for increased sensitivity) with secondary silver conjugate diluted 1:10 (OD=0.75) times with blocking solution (0.2% Blocking Solution). See Tech Note Conjugation of Proteins to Silver Nanoparticles for preparation of a silver conjugate.
7. Wash 3x5 minutes as above.
8. Dry membrane and record data.
9. (OPTIONAL) Proceed with [silver enhancement](#) to improve sensitivity.



## Ordering Information

For ordering call 866-344-3954 or visit us online at [www.cytodiagnosics.com](http://www.cytodiagnosics.com)



**Figure 1.** Example dot-blot assay for Cytodiagnosics [streptavidin gold conjugate](#) (top left) and our [streptavidin silver conjugate](#) (top right) before and after enhancement using Cytodiagnosics silver enhancement kit for membranes. Bottom picture illustrates and highlights the difference in appearance (color) of 50nm anti-human IgG noble metal nanoparticle conjugates prepared using [NHS-activated gold nanoparticles](#), [NHS-activated gold nanourchins](#), and [NHS-activated silver nanoparticles](#), respectively.

## References

1. M. Moeremans, et al., Journal of Immunological Methods, 1984, 74, 353