

Moss, Inc.



**Recombinant
Protein G**

Protein and Resin

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Recombinant Protein G and Protein G Resin

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Moss Recombinant Protein G Specifications

Catalogue Number	PG-100, PG-1000, PG-5000 (Tentative)
Description	Recombinant streptococcal protein G 203 amino acids Lacks albumin binding region Lacks cell wall and cell membrane binding domains N-terminal His tag MW = 22.3 kD but runs higher on SDS-Page gel and SEC HPLC
Source	Escherichia Coli
Physical Appearance	Sterile Filtered Clear Solution
Formulation	2-5 mg/ml solution in deionized water.
Purity	Greater than 95% as determined by SDS-PAGE and HPLC.
Specificity	Contains two Fc-binding domains per protein Does not bind human IgM, IgD or IgA Greater affinity than Protein A for mouse, human, goat, rat and cow IgG. Lower affinity than Protein A for guinea pig, pig, dog and cat IgG.
Activity	Verified by "Bridge" ELISA. Detectable 2-site binding activity at 1 ng/ml.

Protein G Expression and Purification

Large Scale Culture



Lysis



Concentration



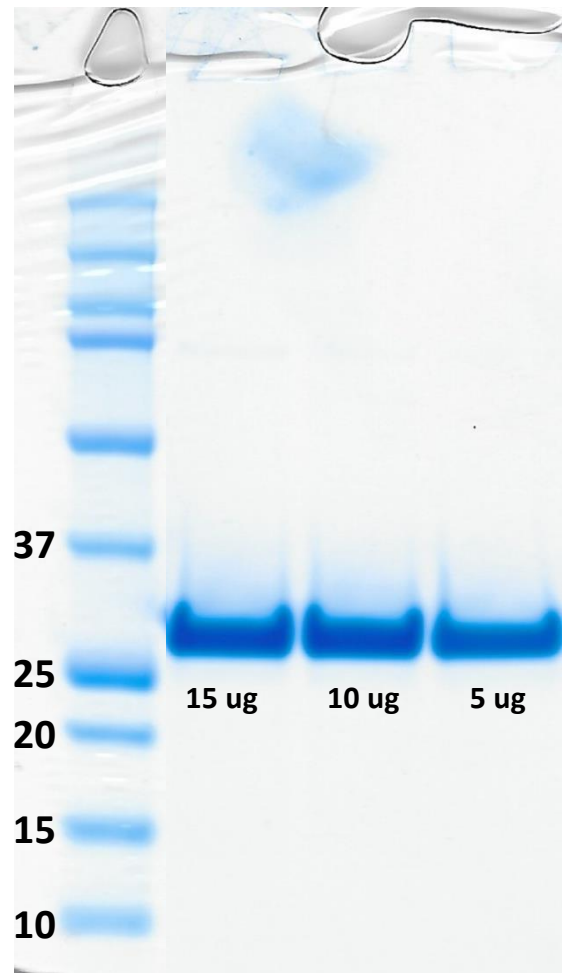
Purification



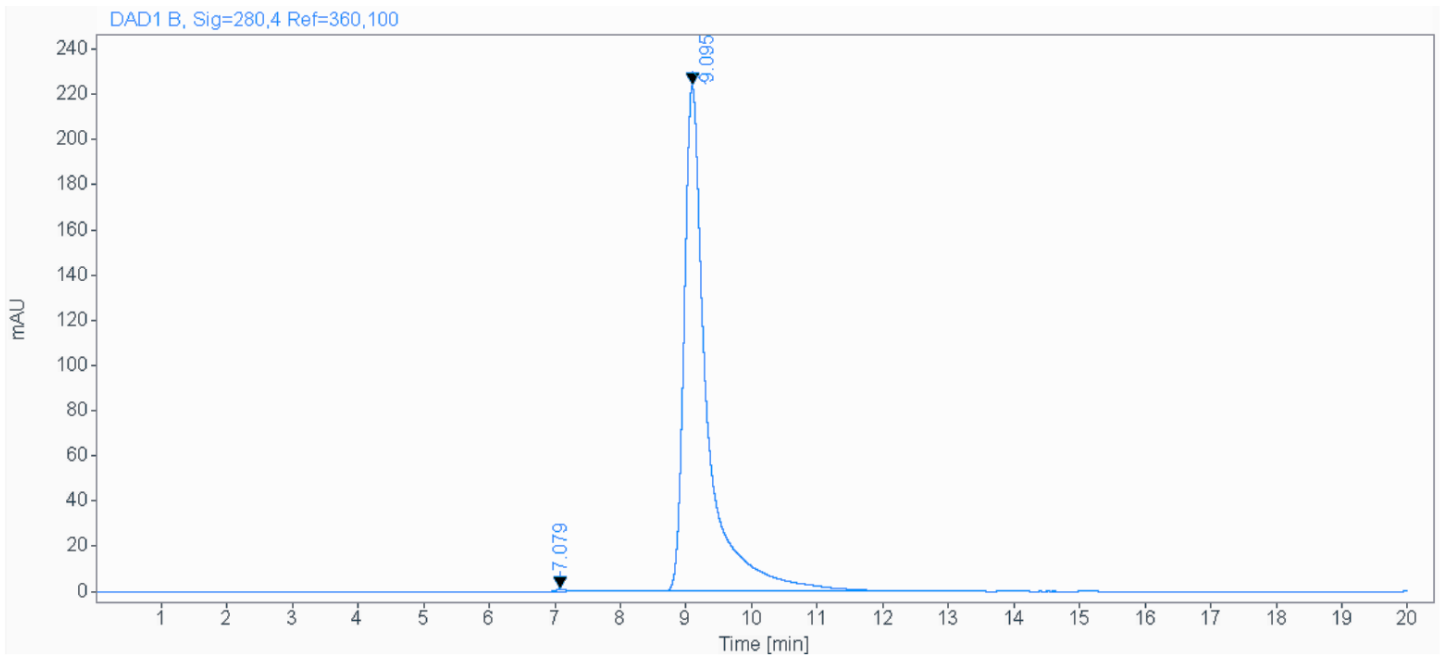
Dialysis



Analysis



SEC HPLC Analysis



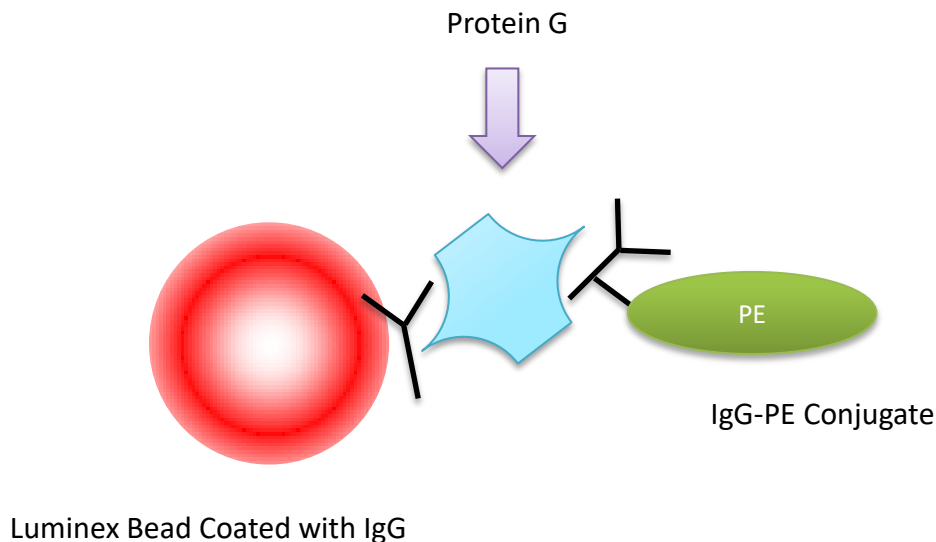
Column: Agilent Bio SEC-5, 150Å 5 μm

Separation Range: 500-150,000 Daltons

Purity: > 95%

Functional Testing with a Bridge Assay

- Functional testing is done with a “Bridge” Assay on the Luminex System.



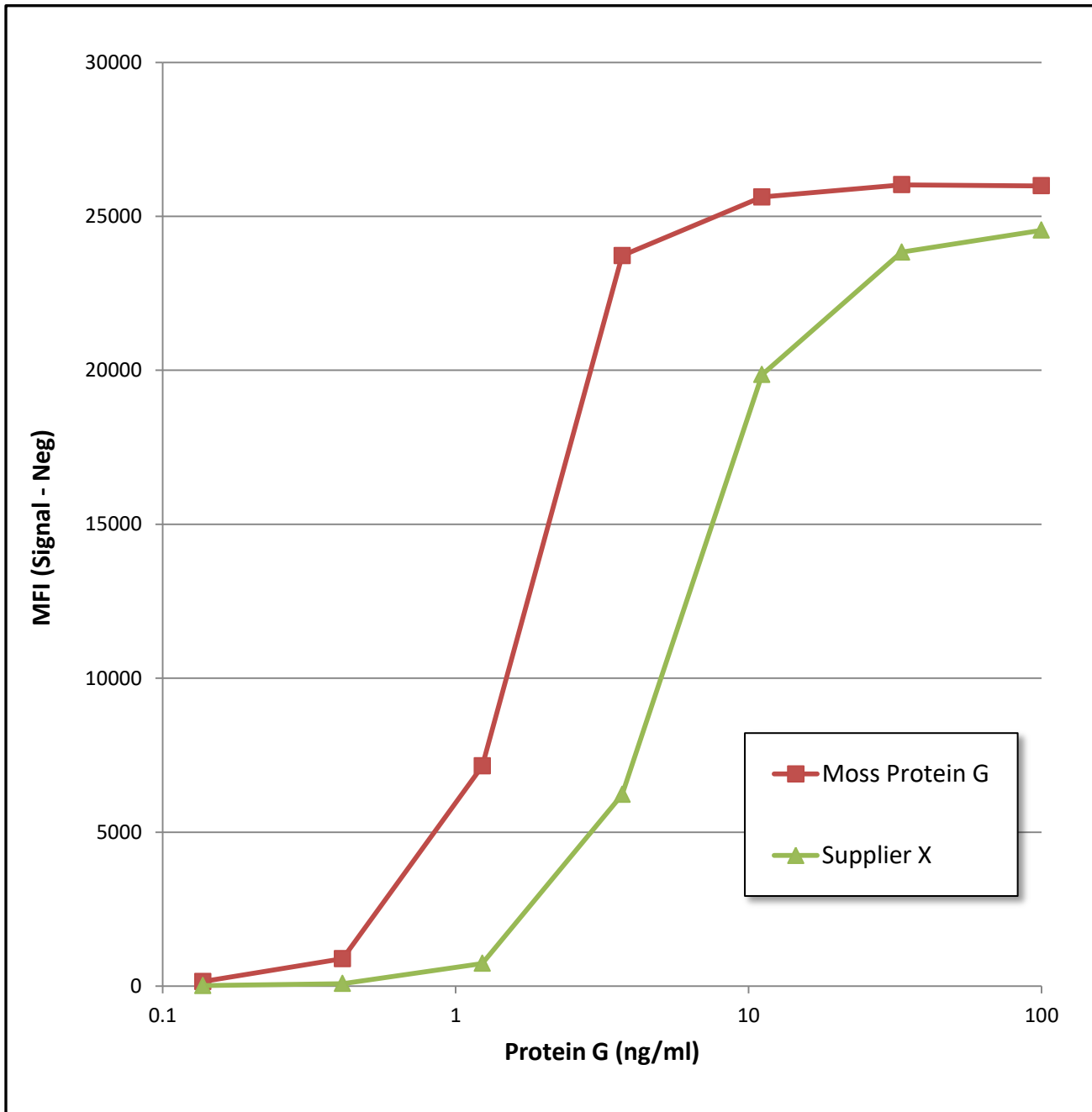
- Protein G is titrated and the dose response curve indicates the activity of the protein.
- The assay also verifies that the Protein G can bind at least 2 IgG molecules.

Reagents and Protocol

- Luminex Bead coated with goat IgG
- Protein G diluted from 100 ng/ml to 140 pg/ml in three-fold dilutions.
- Detection using goat IgG – PE Conjugate
- Protein G from Moss compared to leading supplier (Supplier X).

1. Bead Mix was prepared in Luminex Assay Buffer (LAB)
2. 100 uL of Bead mix was added wells
3. Gentle vacuum was applied to remove liquid.
4. 100 uL of diluted Protein G was added to wells.
5. Plate was incubated for 60 minutes with shaking at 1200 rpm.
6. Beads were washed 3X with 200 uL PBST.
7. 100 uL of Goat-anti-Rabbit-PE was added to each well (5 ug/ml).
8. Plate was incubated for 60 minutes with shaking at 1200 rpm.
9. Beads were washed 3X with 200 uL PBST.
10. 100 uL of PBST was added to each well.
11. The plate was read on the Luminex 100 on the High-Gain setting

ELISA Comparison of Protein G from Moss and Supplier X



- Moss Protein G has significantly higher activity than the Protein G from Supplier X.

Protein G Resin

- Based on 4% or 6% cross-linked agarose.
- Binding capacity of 20 mg human IgG per ml of resin.
- Proprietary coupling chemistry designed for minimal leakage.
- Large scale manufacture in the United States.
- Customized formulation & packaging
- Cost competitive
- Samples available

Contact Information

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