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Datasheet for PG00-03-0500

Protein G Peroxidase Conjugated

Overview

Description:	Protein G Peroxidase Conjugated - PG00-03-0500
Item No.:	PG00-03-0500
Size:	500 µg
Applications:	Dot Blot, ELISA
Origin:	Streptococcus sp.

Product Details

Background:	Protein G is a surface protein of two groups of Streptococcal bacteria that has the ability to bind immunoglobulins. Similar to Protein A, but with slightly different specificity, Protein G is an important agent in the purification of proteins due to its ability to bind the Fc region. While native Protein G binds to albumin, recombinant Protein G is designed to contain only immunoglobulin binding domains to ensure the maximum specific IgG binding capacity. Horseradish Peroxidase (HRP) is an enzyme that utilize organic peroxide compounds as electron donors. Naturally provides protection for plants against pathogens, but can be utilized in molecular biology to convert various substrates to detectable compounds (such as in Western Blotting and ELISAs).
Synonyms:	ProG, Streptococcus G protein, Protein G HRP, peroxidase, Horseradish peroxidase protein G
Species of Origin:	Streptococcus sp.
Conjugate:	Peroxidase (HRP)

Target Details

Purity/Specificity:	Protein G Peroxidase was prepared from chromatographically pure recombinant Protein G. Protein G Peroxidase was assayed by immunoelectrophoresis resulted in a single precipitin arc against anti-Peroxidase and anti-Protein G. No reaction was observed against anti-Protein A.
Relevant Links:	• UniProtKB - P19909 • PG00-03 SDS

Application Details

Tested Applications:	Dot Blot, ELISA
Application Note:	Protein G Peroxidase has been tested by ELISA and dot blot and is a useful reagent in Western Blotting and ELISA experiments. Protein G Peroxidase can be utilized as a pseudo-secondary detection reagent when used in conjunction with an IgG-based primary antibody and appropriate substrate (such as TMB-1000 or Femtomax-110). Protein G Peroxidase is stable at 4° C until restored, at which point it is recommended to freeze aliquots at -20° C.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1:20,000 - 1:200,000
IHC:	1:1,000 - 1:5,000
WB:	1:10,000 - 1:40,000

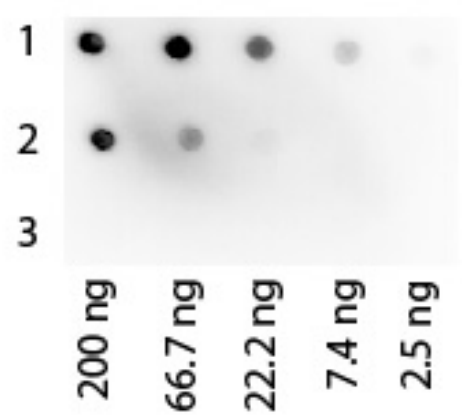
Formulation

Physical State:	Lyophilized
Concentration:	1.0 mg/mL by UV absorbance at 280 nm
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.01% (w/v) Gentamicin Sulfate. Do NOT add Sodium Azide!
Stabilizer:	10 mg/mL Bovine Serum Albumin (BSA) - Immunoglobulin and Protease free
Reconstitution Volume:	500 µL
Reconstitution Buffer:	Restore with deionized water (or equivalent)

Shipping & Handling

Shipping Condition:	Ambient
Storage Condition:	Store vial at 4° C prior to restoration. For extended storage aliquot contents and freeze at -20° C or below. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. Protein G Peroxidase conjugated is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
Expiration:	Expiration date is one (1) year from date of receipt.

Images



Dot Blot
Dot Blot of Protein G Peroxidase Conjugated. Antigen 1: Human IgG. Antigen 2: Rat IgG. Antigen 3: Dog IgG. Load: 200ng followed by a 3-fold serial dilution. Primary antibody: none. Secondary antibody: Protein G Peroxidase Conjugated at 1:1,000 for 60 min at RT. Block: MB-070 for 60 min at RT.

References

- Gotto S. et al. Studies on the mechanism of the immunosuppression caused by bovine mycoplasmosis and the development of its novel control method. *Hokkaido University Collection of Scholarly and Academic Papers.* (2020)
- Goto S, Konnai S, Hirano Y, et al. Upregulation of PD-L1 Expression by Prostaglandin E2 and the Enhancement of IFN-γ by Anti-PD-L1 Antibody Combined With a COX-2 Inhibitor in Mycoplasma bovis Infection. *Front Vet Sci.* (2020)
- Angeles, JMM et al. Field Evaluation of Recombinant Antigen ELISA in Detecting Zoonotic Schistosome Infection Among Water Buffaloes in Endemic Municipalities in the Philippines. *Frontiers in Veterinary Science* (2020)
- Angeles, JMM et al. Utilization of ELISA using thioredoxin peroxidase-1 and tandem repeat proteins for diagnosis of Schistosoma japonicum infection among water buffaloes. *PloS Neglected Tropical Diseases* (2012)

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