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Datasheet for B000-07

Biotin Glucose Oxidase Conjugated

Overview

Description:	Biotin Glucose Oxidase Conjugated - B000-07
Item No.:	B000-07
Size:	5 mg
Applications:	Dot Blot, ELISA, Microarray, Other

Product Details

Background:	Biotin is a small biomolecule important for many cellular processes. Most importantly for biotechnology applications, Biotin is ammenable to conjugation to proteins for use in biochemical assays. Biotin has a very strong affinity for avidin and streptavidin; an attraction that is the strongest and most stable non-covalent interaction known. Glucose oxidase is an enzyme that drives the oxidation of glucose into hydrogen peroxide and D-glucono-δ-lactone. This activity is utilized in biotechnology through colormetric detection assays that are sensitive to the amount of hydrogen peroxide produced. Biotin Glucose Oxidase Conjugated is ideal for investigators involved in Cancer, Cell Signaling, Neuroscience, and Cell Biology research.
Synonyms:	Biotin Glucose Oxidase Conjugation, Glucose Oxidase Conjugated Biotin, Biotin conjugated Glucose Oxidase
Conjugate:	Biotin

Target Details

Purity/Specificity:	Biotin Glucose Oxidase Conjugated was prepared from chromatographically purified biotin. Biotin Glucose Oxidase Conjugated assayed by immunoelectrophoresis resulted in a single precipitin arc against anti-Glucose Oxidase and anti-Biotin.
Relevant Links:	• B000-07 SDS

Application Details

Tested Applications:	Dot Blot, ELISA
Suggested Applications:	Microarray, Other (Based on references)

Application Note:	Biotin Glucose Oxidase Conjugated has been tested by ELISA and dot blot and can be utilized in ELISA and Western Blotting experiments where the assay's target of interest is coupled with streptavidin.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1:8,000 - 1:32,000
IHC:	1:200 - 1:1,000
WB:	1:500 - 1:2,500
Other:	0.01% (w/v) Sodium Azide Added to lot 39296

Formulation

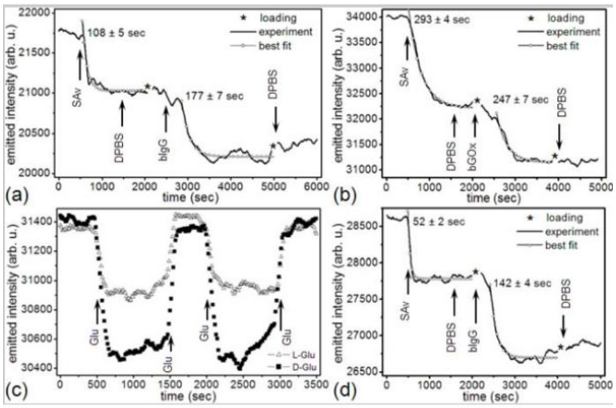
Physical State:	Lyophilized
Concentration:	1 mg/mL by UV absorbance at 280 nm
Buffer:	0.01 M Sodium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Reconstitution Volume:	5.0 mL
Reconstitution Buffer:	Restore with deionized water (or equivalent)

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. Biotin Glucose Oxidase 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.

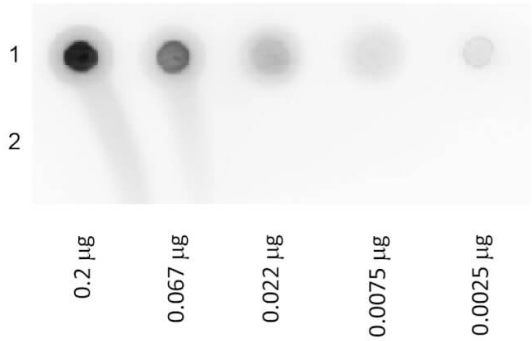
Images

Bottle
Biotin Glucose Oxidase Conjugated



Figure

Monitoring the interaction of a target with a specific ligand: (a) a microsensor's emitted-light intensity at 660 nm during the covalent binding of a 16.7 µM SAv solution with a microsensor's bare gold surface, followed by the interaction of a 1 nM bIgG solution with the microsensor-bound SAv. (□) exponential-decay best-fits to the emitted-light intensities: R2(SAv) = 0.88, R2(bIgG) = 0.84. (b) a microsensor's emitted-light intensity at 660 nm during the covalent binding of a 2 µM SAv solution with the microsensor's bare gold surface, followed by the interaction of a 10 nM bGOx solution with the microsensor-bound SAv. (□) exponential-decay best-fits to the emitted-light intensities: R2(SAv) = 0.99, R2(bGOx) = 0.96. (c) a microsensor's emitted-light intensity at 660 nm during the interactions of 100 mM DGlu/DPBS (50 mM βDGlu equivalent) and 100 mM LGlu/DPBS solutions with microsensor-bound bGOx. The specific microsensor was that shown in Figure 5(b). The LGlu solution had the same refractive index as the DGlu solution but did not bind to bGOx. Both DGlu/DPBS and LGlu/DPBS solutions produced fast emitted-light intensity changes on wash-in/wash out because they had a higher refractive index than DPBS. However, only the DGlu/DPBS solution produced a slower change in emitted-light intensity due to formation of βDGlu – bGOx complex. (d) a microsensor's emitted-light intensity at 660 nm during the covalent binding of a 2 µM SAv solution with the microsensor's bare-gold surface, followed by the interaction of a 66.7 nM bIgG solution with the microsensor-bound SAv. (□) exponential-decay best-fits to the emitted-light intensities: R2(SAv) = 0.90, R2(bIgG) = 0.94. The sample flow rate in all experiments was ≈0.2 nL/s with a solution temperature of 24.0 ± 0.1 °C. * No signal was recorded during sample loading. Figure 5. PMID: 23443397.



Dot Blot

Dot Blot of BIOTIN GLUCOSE OXIDASE Conjugated. Lane 1: Biotin Conjugated Glucose Oxidase. Lane 2: Glucose Oxidase. Load: 3-fold serial dilution starting at 200 ng. Primary Antibody: None. Secondary antibody: HRP Streptavidin at 1:40,000 for 30 min at RT. Block: 1% BSA-TTBS 30 min at RT.

References

- Kemp E et al. Influence of enzyme immobilization and skin-sensor interface on non-invasive glucose determination from interstitial fluid obtained by magnetohydrodynamic extraction. *Biosens Bioelectron.* (2022)
- Amarie D et al. Label-free microcavity biosensors: steps towards personalized medicine. *Sensors (Basel, Switzerland)* (2012)

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