

Datasheet for 200-301-MV2**ModDetect® Phosphorothioate Clone PS08****Overview**

Description:	ModDetect® Phosphorothioate Clone PS08 - 200-301-MV2
Item No.:	200-301-MV2
Size:	100 µg
Applications:	ELISA
Host Species:	Mouse

Product Details

Background:	Current studies focusing on RNA therapeutics use as potential drugs antisense oligonucleotides (ASO), short interfering RNA (siRNA), and micro RNA (miRNA). The choice of oligonucleotide chosen for a specific treatment is dependent on many factors. However, all oligo therapeutics must be modified in some manner, as unmodified nucleotides are difficult to identify and are highly susceptible to degradation by endogenous nucleases. Modifications can be created within the sugar-phosphate backbone (first generation), the ribose sugar (second and third generation), or at multiple locations (third generation). Antibodies to modified oligonucleotides are useful for basic immunoassays including, ELISA, IHC, and IF. In addition, several types of toxicology assays (immunogenicity assays), such as antibody-drug assays (ADA) or other pharmacokinetic (PK) and pharmacodynamic (PD) studies require oligonucleotide antibodies as analytical tools for general research and preclinical trial experiments. Antibodies to an oligonucleotide therapeutic allow researchers to assess cellular uptake, tissue distribution, and can serve as a positive control for immunogenicity studies.
Synonyms:	Phosphorothioate, PS, ASO, anti-sense oligonucleotide, siRNA, RNA therapeutic
Host Species:	Mouse
Clonality:	Monoclonal
Clone ID:	PS08
Format:	IgG2b

Target Details

Immunogen Type:	Other
------------------------	-------

Immunogen:	ModDetect® Phosphorothioate Clone PS08 was prepared from cell culture supernatant produced by repeated immunizations with a proprietary oligo sequence.
Purity/Specificity:	This Protein A purified ModDetect® Phosphorothioate Clone PS08 is directed against phosphorothioate modified backbone. This product was Protein A purified from monospecific supernatant.

Application Details

Tested Applications:	ELISA
Application Note:	ModDetect® Phosphorothioate Clone PS08 has been validated for use in ELISA. In antigen-down or immunometric ELISAs, the ModDetect® Phosphorothioate Clone PS08 preferentially detects phosphorothioate modified phosphate groups over native phosphodiester sugar-phosphate backbones. It is also likely to be functional in IF and IHC assays, however, its sensitivity, specificity, and conditions for optimal use in these assays has not yet been determined. All assays should be optimized by the user.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.

Formulation

Physical State:	Liquid (sterile filtered)
Concentration:	0.992mg/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) Sodium Azide
Stabilizer:	None

Shipping & Handling

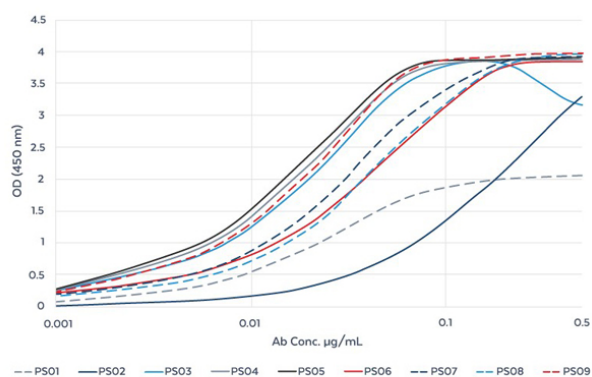
Shipping Condition:	Dry Ice
Storage Condition:	Store vial at -20° C or below prior to opening. Store the vial at -20°C or below after dilution. Avoid cycles of freezing and thawing.
Expiration:	Expiration date is one (1) year from date of receipt.

Images



Vial

ModDetect® Phosphorothioate



ELISA

ELISA profiles of 9 ModDetect® Phosphorothioate Detection reagents reactive to control oligonucleotides. Fully PS-modified positive control ASOs were used to show differential sensitivity and specificity of ModDetect® Phosphorothioate clones selected for validation. Clones were not reactive with the same sequence synthesized with PO backbones (data not shown). Each well was coated in duplicate with 5 µg/mL of BSA-oligo conjugate. The starting dilution of antibody was 5 µg/mL and the X-axis represents the Log10 of a 3-fold dilution. This titration is a 4-parameter curve fit where the IC50 is defined as the titer of the antibody. Assay performed using 3% fish gel, Mouse IgG (gamma 1, 2a, 2b and 3 chain) Antibody Peroxidase Conjugated (p/n 610-403-C46) and TMB ELISA Peroxidase Substrate (p/n TMBE-1000).

References

- Chimento DP et al. Bioanalytical Assays for Oligonucleotide Therapeutics: Adding Antibody-Based Immunoassays to the Toolbox as an Orthogonal Approach to LC-MS/MS and Ligand Binding Assays. *Nucleic Acid Ther.* (2025)

Disclaimer

THE MATERIALS PROVIDED WITH THIS CERTIFICATE OF ANALYSIS (MATERIALS) ARE FOR RESEARCH USE ONLY AND SUBJECT TO A MATERIAL EVALUATION AGREEMENT.

BY USING THIS PRODUCT, THE USER AGREES TO BE BOUND BY THE TERMS OF THE MATERIAL EVALUATION AGREEMENT. If the user is not willing to accept the terms of the agreement and the product is unused, Rockland will accept return of the unused product and provide the user with a full refund. Pursuant to the agreement, the user may use the product for research use only.

NO TRANSFER OR COMMERCIAL USE OF THIS PRODUCT IS ALLOWED. Commercial use means a use of the product in exchange for consideration, including use in the manufacture of a product, in a clinical trial or other testing regulated by a government agency (e.g. FDA, EMEA, EPA, etc.) including ADA and clearance assays, use of the product in the provision of services, and the resale of the product. Rockland reserves all other rights not permitted under the license granted herein, including the rights which are embodied in other products or materials derived from the use of the Materials or know-how embodied in the Materials.

NO RIGHT IS GRANTED UNDER THE LICENSE TO MODIFY OR OTHERWISE CREATE DERIVATIVES OR VARIATIONS OF THE PRODUCT OR TO USE ROCKLAND'S KNOW-HOW OR OTHER INTELLECTUAL PROPERTY FOR OTHER USES. No other use of this product is authorized without the express written prior consent of Rockland, including without limitation, unauthorized commercial uses, in vitro diagnostic uses, therapeutic uses, or any type of consumption by or application to humans or animals.

For uses outside the agreement including any diagnostic, therapeutic or commercial use, please contact Rockland for supply and licensing information at licensing@rockland.com.