

Datasheet for TMBE-8000**TMB ELISA Peroxidas Substrate (BULK ORDER)****Overview**

Description:	TMBE ELISA Peroxidase Substrate (BULK ORDER) - TMBE-8000
Item No.:	TMBE-8000
Size:	8 x 1 L
Applications:	ELISA

Product Details

Background:	TMBE (3,3',5,5'-Tetramethylbenzidine) is a colorimetric substrate for peroxidase (HRP)-based enzyme immunoassays, notably ELISAs, and is known for producing a blue color that changes to yellow upon stopping the reaction with sulfuric acid. The color change is quantifiable at 450 nm. TMBE's high sensitivity makes it ideal for detecting low concentrations of analytes.
Synonyms:	TMBE Peroxidase Substrate, TMB ELISA Peroxidase Substrate

Target Details

Purity/Specificity:	pH: 4.0 +/- 0.05 Stability @ 18° to 26°C: PASS Stability @ 4°C: PASS QC Raw Material: PASS Absorbance check of final product: PASS Performance Data per ELISA: PASS
Relevant Links:	TMBE SDS

Application Details

Tested Applications:	ELISA
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Application Note:	TMB ELISA Peroxidase Substrate will produce a soluble blue end product read at 370 nm or 655 nm. TMB ELISA Peroxidase Substrate incubation time will vary depending on the assay conditions. No dilutions are required, TMB ELISA Peroxidase Substrate comes ready to use.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1X

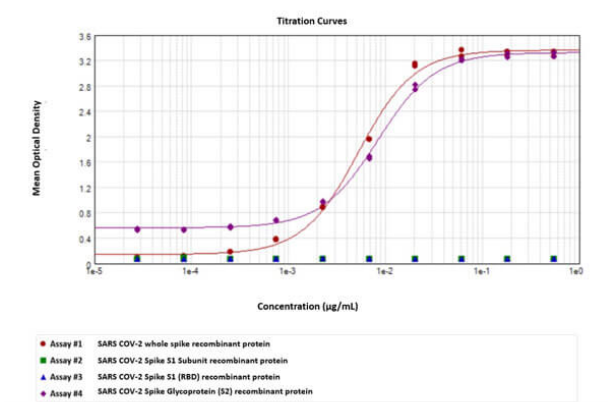
Formulation

Physical State:	Liquid - clear to very light blue colored liquid
Concentration:	1X
Stabilizer:	Proprietary buffer with enhancer

Shipping & Handling

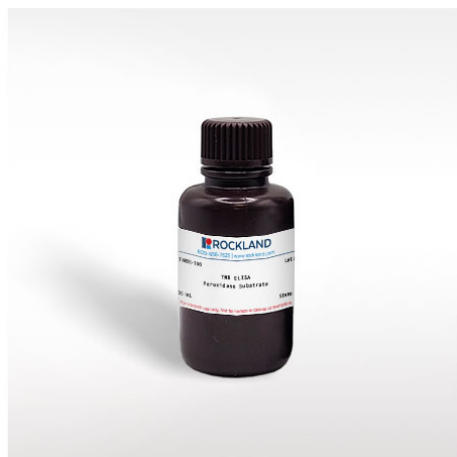
Shipping Condition:	Ambient
Storage Condition:	Store container at 4° C prior to opening. Protect from moisture and light. No special shipping conditions or precautions are required.
Expiration:	Expiration date is two (2) years from date of receipt.

Images



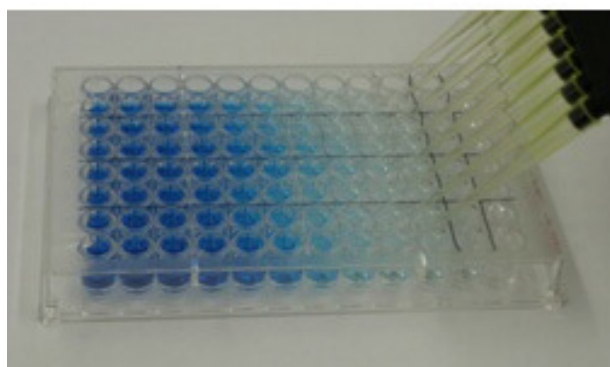
ELISA

ELISA results of Mouse Anti-SARS CoV-2 Spike Protein (S2) Antibody using TMBE-1000. Each well was coated in duplicate with 0.5µg of rec SARS CoV-2 Whole Spike protein [RED line], rec SARS CoV-2 Spike (S1) [GREEN line], rec SARS CoV-2 Spike (S1) RBD protein [BLUE line], and rec SARS CoV-2 Spike (S2) glycoprotein [PURPLE line]. The working dilution for SARS-CoV-2 whole spike is 1:190,000 and SARS CoV-2 Spike (S2) glycoprotein is 1:120,000. The starting dilution of antibody was 0.55µg/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 Rabbit Anti-Mouse IgG HRP conjugated (p/n 610-403-C46) at 1:8000 and TMB substrate (p/n TMBE-1000). SARS CoV-2 Spike (S2) EC50: 8ng/mL; SARS CoV-2 Whole Spike EC50: 5ng/mL.



Bottle

TMB ELISA Peroxidase Substrate



ELISA

Rockland Immunochemicals produces a wide variety of buffers and substrates for use in ELISAs. Antigen was diluted in ELISA Microwell Coating Stabilizer (p/n MB-063-0100) added to the microwell plate and incubated overnight at 4°C. The plate was then blocked with ELISA Microwell Blocking Buffer with Stabilizer (p/n MB-064-1000) for 2 hours. The primary antibody was diluted in PBS Fish Gel Concentrate (1:10)(p/n MB-066-0100), added to the plate, and allowed to incubate 1 hour at room temperature. HRP conjugated secondary antibody was diluted in HRP Conjugate Stabilizer (p/n MB-060-0100), added to the plate, and allowed to incubate for 30 minutes at room temperature. TMB ELISA Peroxidase Substrate (p/n TMBE-1000) was added to the plate and allowed to incubate for 30 minutes at room temperature. The reaction was then stopped with 1M HCl and read at 450nm.

References

- Escalera A et al. Early Fc-effector antibody signatures impact COVID-19 disease trajectory. *medRxiv*. (2026)
- Braun MR et al. Transfer of breast milk IgA to infants after oral bivalent norovirus vaccination of post-partum women. *NPJ Vaccines*. (2026)
- George-Alexander LMM et al. G9a controls plasma cell differentiation through FOXO1 and ETS1 binding site regulatory networks. *J Immunol*. (2025)
- Yuan Y et al. Biochemical and Biophysical Properties of Extracellular Matrix Nanofibers Modulate iPSC-Derived Human Hepatocyte Maturation. *J Biomed Mater Res A*. (2025)
- Rojo-Fernandez A et al. Systemic and mucosal immune signatures of protection against SARS-CoV-2 transmission in humans. *Cell Rep Med*. (2025)

- Fial I et al. Characterizing Antibodies Targeting Antisense Oligonucleotide Phosphorothioate and 2'-O-Methoxyethyl Modifications for Intracellular Trafficking and Biodistribution Studies. *Nucleic Acid Ther.* (2025)
- Brown GE et al. Liver portal fibroblasts induce the functions of primary human hepatocytes in vitro. *Commun Biol.* (2025)
- Rasquinha MT et al. Mt10 Vaccine Protects Diversity Outbred Mice from CVB3 Infection by Producing Virus-Specific Neutralizing Antibodies and Diverse Antibody Isotypes. *Vaccines (Basel).* (2024)
- Escalera A et al. SARS-CoV-2 infection induces robust mucosal antibody responses in the upper respiratory tract. *iScience.* (2024)
- Taira CL et al. Vaccination with O-linked Mannans Protects against Systemic Candidiasis through Innate Lymphocyte Populations. *J Immunol.* (2024)
- Barker SJ et al. Targeting Transferrin Receptor to Transport Antisense Oligonucleotides Across the Blood-Brain Barrier. *Sci Transl Med.* (2023)
- Liu JS et al. Decellularized Liver Nanofibers Enhance and Stabilize the Long-Term Functions of Primary Human Hepatocytes In Vitro. *Adv Healthc Mater.* (2023)
- Pandit M et al. AMPK suppresses Th2 cell responses by repressing mTORC2. *Exp Mol Med.* (2022)
- Quach HQ et al. Detection of SARS-CoV-2 peptide-specific antibodies in Syrian hamster serum by ELISA. *J Immunol Methods.* (2022)
- Kukla, DA et al. Assessing the compatibility of primary human hepatocyte culture within porous silk sponges. *Rsc Advances* (2022)
- Pandit M et al. LKB1-PTEN axis controls Th1 and Th17 cell differentiation via regulating mTORC1. *J Mol Med (Berl).* (2021)
- Kratzer B et al. Immunological imprint of COVID-19 on human peripheral blood leukocyte populations. *Allergy* (2021)
- Scharer CD et al. Antibody-secreting cell destiny emerges during the initial stages of B-cell activation. *Nat Commun.* (2020)
- Shao W et al. Serum lipoprotein-derived fatty acids regulate hypoxia-inducible factor. *J Biol Chem.* (2020)
- Harshbarger W et al. Convergent structural features of respiratory syncytial virus neutralizing antibodies and plasticity of the site V epitope on prefusion F. *PLoS Pathog.* (2020)
- Kukla DA. et. al. Primary Human Hepatocytes Maintain Long-term Functions in Porous Silk Scaffolds Containing Extracellular Matrix Proteins. *bioRxiv* (2020)
- Kukla DA. et. al. Microscale Collagen and Fibroblast Interactions Enhance Primary Human Hepatocyte Functions in Three-Dimensional Models. *Gene Expr.* (2020)
- Ferdman J et al. Intra-seasonal antibody repertoire analysis of a subject immunized with an MF59®-adjuvanted pandemic 2009 H1N1 vaccine. *Vaccine.* (2019)
- Haines, RR et al. The Histone Demethylase LSD1 Regulates B Cell Proliferation and Plasmablast Differentiation. *Journal of Immunology (Baltimore, Md. : 1950)* (2018)
- Tomita, K et al. Antibodies against adenovirus fiber and penton base proteins inhibit adenovirus vector-mediated transduction in the liver following systemic administration. *Scientific Reports* (2018)

- Barwick, BG et al. B cell activation and plasma cell differentiation are inhibited by de novo DNA methylation. *Nature Communications* (2018)
- Steff, AM et al. Pre-fusion RSV F strongly boosts pre-fusion specific neutralizing responses in cattle pre-exposed to bovine RSV. *Nature Communications* (2017)
- O'shannessy, DJ et al. Novel antibody probes for the characterization of endosialin/TEM-1. *Oncotarget* (2016)
- Parry, HM et al. Cytomegalovirus viral load within blood increases markedly in healthy people over the age of 70 years. *Immunity & Ageing : I & A* (2016)
- Ciferri et al. Antigenic Characterization of the HCMV gH/gL/gO and Pentamer Cell Entry Complexes Reveals Binding Sites for Potently Neutralizing Human Antibodies. *PLOS Pathogens* (2015)
- Shimizu, K et al. Suppression of leaky expression of adenovirus genes by insertion of microRNA-targeted sequences in the replication-incompetent adenovirus vector genome. *Molecular Therapy. Methods & Clinical Development* (2014)
- O'shannessy, DJ et al. Characterization of the human folate receptor alpha via novel antibody-based probes. *Oncotarget* (2011)

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