TruStrips WBV for Flaviviruses

Catalog# Description

WBFEX1100-10 TruStrip WBV NS1 **Flaviviruses** (Zika, WNV, DENV, YFV) Explorer Western Blot Validation Strips (10/pk); 2-ab zone (Human IgG)

WBFEX1105-10 TruStrip WBV NS1 Flaviviruses (Zika, WNV, DENV, YFV) Explorer Western Blot Validation Strips (10/pk); 2-ab zone (Human IgM)

WBFEX1200-10 TruStrip WBV Env Flaviviruses (Zika, WNV, DENV, YFV) Explorer Western Blot Validation Strips (10/pk); 2-ab zone (Human IgG)

WBFEX1205-10 TruStrip WBV Env Flaviviruses (Zika, WNV, DENV, YFV) Explorer Western Blot Validation Strips (10/pk); 2-ab zone (Human IgM)

WBFEX1300-10 TruStrip WBV prM Flaviviruses (Zika, WNV, DENV, YFV) Explorer Western Blot Validation Strips (10/pk); 2-ab zone (Human IgG)

WBFEX1305-10 TruStrip WBV prM Flaviviruses (Zika, WNV, DENV, YFV) Explorer Western Blot Validation Strips (10/pk); 2-ab zone (Human IgM)

WBDEX1400-10 TruStrip WBV Dengue Viruses NS1 (DV1, DV2, DV3, DV4) Explorer Western Blot Validation Strips (10/pk); 2-ab zone (Human IgG)

WBDEX1405-10 TruStrip WBV Dengue Viruses NS1 (DV1, DV2, DV3, DV4) Explorer Western Blot Validation Strips (10/pk); 2-ab zone (Human IgM)

WBDEX1500-10 TruStrip WBV Dengue Viruses Env (DV1, DV2, DV3, DV4) Explorer Western Blot Validation Strips (10/pk); 2-ab zone (Human IgG)

WBDEX1505-10 TruStrip WBV Dengue Viruses Env (DV1, DV2, DV3, DV4) Explorer Western Blot Validation Strips (10/pk); 2-ab zone (Human IgM)

WBDEX1600-10 TruStrip WBV Dengue Viruses prM (DV1, DV2, DV3, DV4) Explorer Western Blot Validation Strips (10/pk); 2-ab zone (Human IgG)

WBDEX1605-10 TruStrip WBV Dengue Viruses prM (DV1, DV2, DV3, DV4) Explorer Western Blot Validation Strips (10/pk); 2-ab zone (Human IgM)

WBWEX1700-10 TruStrip WBV West Nile Viruse (WNV: NS1, Env, Cap, prM) Explorer Western Blot Validation Strips (10/pk); 2-ab zone (Human IgG)

WBWEX1705-10 TruStrip WBV West Nile Viruse (WNV: NS1, Env, Cap, prM) Explorer Western Blot Validation Strips (10/pk); 2-ab zone (Human IgM)

WBWYX1800-10 TruStrip WBV Yellow Fever Virus (YFV: NS1, Env, prM) Explorer Western Blot Validation Strips (10/pk); 2-ab zone (Human IgG)

WBYEX1805-10 TruStrip WBV Yellow Fever Virus (YFV: NS1, Env, prM) Explorer Western Blot Validation Strips (10/pk); 2-ab zone (Human IgM)

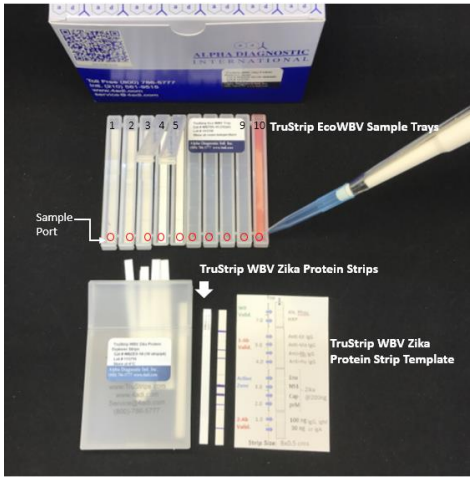
WBZJX1900-10 TruStrip WBV Japanese Encephalitis Virus (JEV: NS1, Env, prM) Explorer Western Blot Validation Strips (10/pk); 2-ab zone (Human IgG)

WBZJX1905-10 TruStrip WBV Japanese Encephalitis Virus (JEV: NS1, Env, prM) Explorer Western Blot Validation Strips (10/pk); 2-ab zone (Human IgM)

WBZTX2000-10 TruStrip WBV Tickborne Encephalitis Virus (TBEV: NS1, Env, prM) Explorer Western Blot Validation Strips (10/pk); 2-ab zone (Human IgG)

WBZTX2005-10 TruStrip WBV Tickborne Encephalitis Virus (TBEV: NS1, Env, prM) Explorer Western Blot Validation Strips (10/pk); 2-ab zone (Human IgM)

TruStrip WBV Zika Virus Proteins (Env, NS1, Cap, prM) Explorer Western Blot Validation Strips



- Cat# WBZEX1000-10,10 Strips/pk
- Cat# WBZEX1000-50, 50 Strips/pk

A line blot or Western blot validation strips for the qualitative detection of human antibodies to Zika Proteins

For research use only (RUO), not for diagnosis, cure or prevention of the disease.

ALPHA DIAGNOSTIC INTERNATIONAL

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Web Site: www.4adi.com

Draft Manual: Please use the manual supplied with the product for any lot specific changes in the protocol.

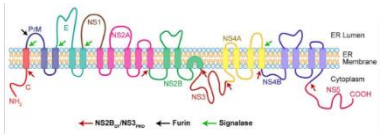
TruStrip® Zika WBV Antibody Explorer -Contents

Components	#WBZEX10	#WBZEX50
TruStrip WBV Zika strips (0.5x8 cms) 10 strips packed in plastic flip top box # **WBZEX1001**	10 strips	50 strips
TruStrip EcoWB Trays for WBV Strips #WBT05-10	10	50
TruStrip WBV Zika strip template # **WBZEX1002**	1	1
Complete Instruction Manual # WBZEX10-M	1	1

Intended Use

TruStrip® Zika WBV Antibody Explorer* is a smart, simple, and novel method to detect Zika proteins antibodies in human or animal samples or use it for Western Blot Validation and Quantification system. TruStrip Zika WBV strips are supplied with highly purified, recombinant Zika proteins (Env, NS1, prM, and Capsid at 200 ng/line) that are used to find Zika antibodies in human or animals samples. Additional control lines are included to identify, control, and validate the use of primary antibodies (1-Ab), secondary antibodies (2-Ab) and the detection system (HRP or Alk. Phosphatase). TruStrip Zika WBV Antibody Explorer strips provide a convenient and fool-proof assay for Zika research. A specially designed WBV tray is also provided to test samples in as little as 0.5 ml samples or antibodies. The strips contain no virus or virus derived proteins. This kit is for research use only, not for diagnostic or therapeutic use.
TruStrip® *is a trademark of ADI.* * Patent pending.

INTRODUCTION



Zika virus (ZIKV), a member of the virus family Flaviviridae (flavus means yellow), transmitted by daytime-active Aedes mosquitoes, such as A. aegypti and A. albopictus. Zika virus is related to the dengue, yellow fever, Japanese encephalitis, and West Nile viruses. Like other flaviviruses, Zika virus is enveloped and icosahedral and has a non-segmented, positive-sense ss-RNA genome. There are two lineages of the Zika virus. Effective vaccines for yellow fever virus, Japanese encephalitis, and tick-borne encephalitis have been developed but there are no vaccines for Zika virus. Zika virus genome codes for a polyprotein that is subsequently cleaved into capsid (C), precursor membrane (prM), envelope (E), and non-structural proteins (NS). The E protein composes the majority of the virion surface and is involved with aspects of replication such as host cell binding and membrane fusion. NS1, NS3, and NS5 are large, highly-conserved proteins while the NS2A, NS2B, NS4A, and NS4B proteins are smaller, hydrophobic proteins. Like other flaviviruses, both structural and non-structural protein antibodies are detected during Zika virus infection. The member of flaviviruses share 40-60% protein sequence conservation. Moreover, vaccines have become available for JEV, YFV, and Dengue. Therefore, it is important to rule out the presence of Zika antibodies due to vaccination and/or infection from related viruses.

Zika Antibody controls and other WBV Reagents

Cat#	Description	Size
ZENV11-W-2	Rabbit **Anti-Zika Envelop** Protein antiserum optimized for WBV strips, 2 ml ready to use (sufficient for 4 strips)	2 ml
ZNS111-W-2	Rabbit **Anti-Zika NS1** Protein antiserum optimized for WBV strips, 2 ml ready to use (sufficient for 4 strips)	2 ml
ZCAP17-W-2	Rabbit **Anti-Zika Capsid** Protein antiserum optimized for WBV strips, 2 ml ready to use (sufficient for 4 strips)	2 ml
ZPR11-W-2	Rabbit **Anti-Zika prM** Protein antiserum optimized for WBV strips, 2 ml ready to use (sufficient for 4 strips)	2 ml
10119-WH-10	Goat Anti-**Human IgG-HRP** Conjugate, optimized for WBV strips, 6 ml ready to use (sufficient for 10 strips)	6 ml
10219-WH-10	Goat Anti-**Human IgM-HRP** Conjugate, optimized for WBV strips, 6 ml ready to use (sufficient for 10 strips)	6 ml
10119-WG-10	Goat Anti-**Human IgG-Gold** Conjugate, optimized for WBV strips, 6 ml ready to use (sufficient for 10 strips)	6 ml
10219-WG-10	Goat Anti-**Human IgM-Gold** Conjugate, optimized for WBV strips, 6 ml ready to use (sufficient for 10 strips)	6 ml
WBV-A-10	WBV buffer and substrate set (Sample diluent buffer, Wash buffer, TMB substrate for Western) (sufficient for 10 strips)	1 pk

TruStrip WBV Related Items

Catalog# Description

WBZEX1000-10 TruStrip WBV Zika Virus Proteins (Env, NS1, Cap, prM) Explorer Western Blot Validation Strips (10/pk); 2-ab zone (Human IgG)

WBZEX1005-10 TruStrip WBV Zika Virus Proteins (Env, NS1, Cap, prM) Explorer Western Blot Validation Strips (10/pk); 2-ab zone (Human IgM)

WBZEX1010-10 TruStrip WBV Zika Virus Proteins (Env, NS1, Cap, prM) Explorer Western Blot Validation Strips (10/pk); 2-ab zone (Mouse IgG)

WBZEX1015-10 TruStrip WBV Zika Virus Proteins (Env, NS1, Cap, prM) Explorer Western Blot Validation Strips (10/pk); 2-ab zone (Mouse IgM)

WBZEX1020-10 TruStrip WBV Zika Virus Proteins (Env, NS1, Cap, prM) Explorer Western Blot Validation Strips (10/pk); 2-ab zone (Monkey IgG)

WBZEX1025-10 TruStrip WBV Zika Virus Proteins (Env, NS1, Cap, prM) Explorer Western Blot Validation Strips (10/pk); 2-ab zone (Monkey IgM)

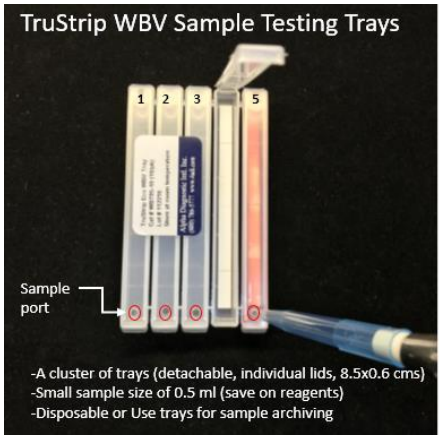
LIMITATIONS

This kit should be used for research use only (RUO). All positive tests must be verified by other approved tests. This ELISA kit is not to be used for diagnosis or cure of Zika or other diseases.

MSDS

Calibrators, Sample Diluent, and Antibody HRP contain bromonitrodioxane (BND: 0.05%, w/v). Stop Solution contains dilute sulfuric acid. Follow good laboratory practices, and avoid ingestion or contact of any reagent with skin, eyes or mucous membranes. All reagents may be disposed of down a drain with copious amounts of water. MSDS for TMB, sulfuric acid and BND can be requested or obtained from the ADI website: Sample Diluent and anti-Protein G-HRP contain Proclin 300 (0.05%, v/v). http://4adi.com/objects/catalog/product/extras/ELISA-Kit-SDS-MSDS-Set-1.pdf

Suggested Use of Zika WBV Strips



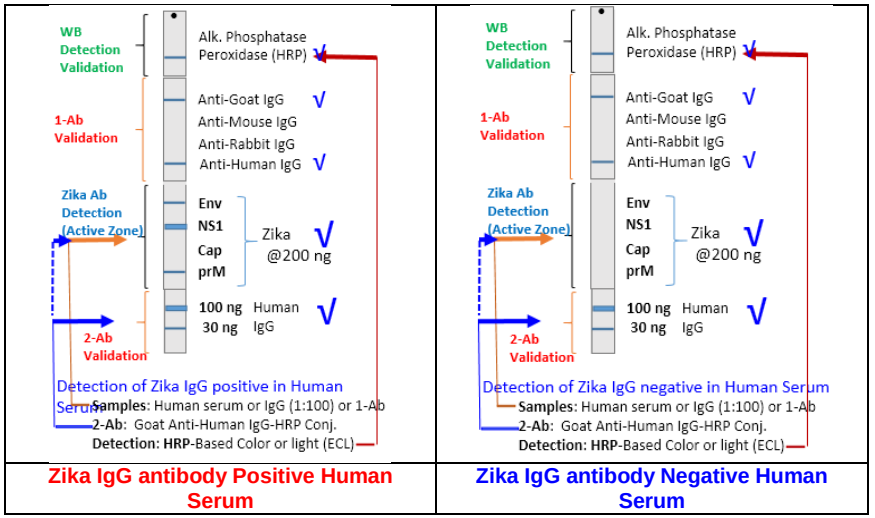
1. We recommend that users employ a known protocol that is commonly used for dot blot or western blot. Use colorimetric, ECL or fluorescent based detection methods.
2. Take required # of strips from the flip top box using forceps and wear gloves so to avoid contamination of the strips. Arrange strips in EcoWBV trays and identify with the # on the strip (back) and the top of the trays. Close the lid. Samples can be added or removed from the sample port (a whole at lower end of the tray. You may open the lid and add/remove samples as well.
3. Dilute samples in appropriate buffers (PBS/tween/BSA or milk) or other appropriate buffers. ADI also supplies a convenient set of reagents (see page 6). Use at least 0.5 ml of the diluted human or animals sera containing antibodies to Zika proteins or test antibodies (mono or poly). Close the lid and Incubate for at least 1 hr at room on an orbital shaker. **Note**: Users may opt to use their own proven methods.
4. Aspirate the samples or remove with a pipette. Wash strips with PBS/Tween using at least 2 ml buffer (1-2 min each, 3X).
5. Incubate with appropriately diluted secondary antibody conjugates. Incubate for at least 30-60 min at room temp on an orbital shaker.
6. Wash as in step 3.
7. Use colorimetric or ECL reagents to detect bound antibodies. Use at least 05-1 ml reagents per sample.
8. Record results. Use the layout on page 2 to identify the bands in various zones. Results can also be recorded with an imager to record relative intensity of various bands.
9. EcoWBV tray can be used to store the used WBV strips.

Learn More

https://trustrips.com/TruStripWBV/WBV-Aboutus

https://youtu.be/QGp0Y9Cm6ls

Expected Results



Typical Example for the Detection of human IgG antibodies to Zika proteins

Samples: Human serum 1:100 diluted in appropriate buffer
Sample Incubation: 1 hr at room temp with shaking
Secondary antibodies: Goat Anti-Human IgG-HRP Conjugate (appropriate diluted, e.g., 1:5000). Incubation for 30 min at room temp with shaking
Detection: Single-solution TMB substrate for Western Blot. Incubation for 5-10 min at room temp with shaking.

Typical Results & Interpretations

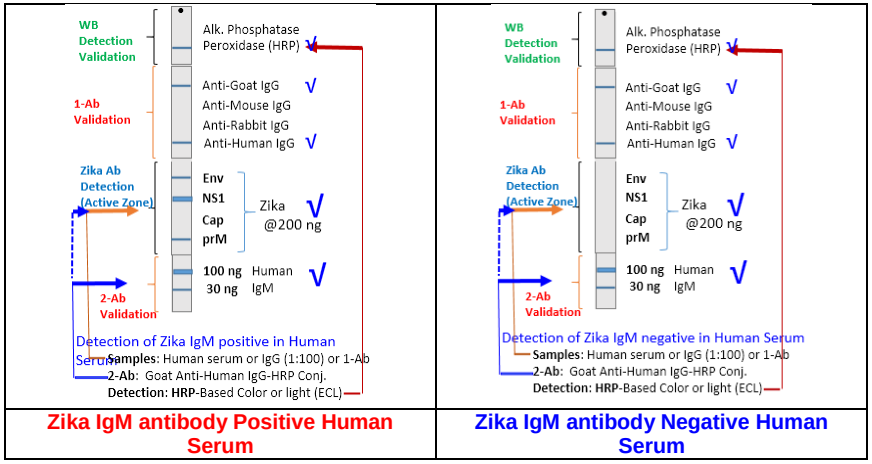
Zika antibody +ve sample reacted with Env, NS1, and prM bands. Intensity of bands suggest higher levels of NS1 antibodies than Env and prM. No antibodies to Zika capsid were detected. The negative or controls samples must be 'negative for all bands'. If too much of the sample (e.g., 1:10) then non-specific reaction may occur. So users must optimize the sample dilution, 2-ab conjugate concentration to make sure that control samples are negative.

In the above example, 2-ab conjugate detected 100 ng and 30 ng of human IgG in 2-ab zone. so sensitivity of detection is at least 30 ng of human IgG.

1-ab zone shows a band at 'anti-human IgG' indicating that samples were of human origin. The band at 'anti-goat IgG' developed as the host of 2-ab was 'goat'. If a mouse host was mistakenly used then the band at mouse would have been visible. No results in the Zika active zone would indicate an incorrect conjugate was used. In addition, the intensity of the bands should be about equal to the '100 ng human IgG'. Absence of a band at 'anti-goat IgG' region could be due to the use very low concentrations of the 2-ab conjugate.

Typical Example for the Detection of human IgG antibodies to Zika proteins

Samples: Human serum 1:100 diluted in appropriate buffer
Sample Incubation: 1 hr at room temp with shaking
Secondary antibodies: Goat Anti-Human **IgM**-HRP Conjugate (appropriate diluted, e.g., 1:5000). Incubation for 30 min at room temp with shaking
Detection: Single-solution TMB substrate for Western Blot. Incubation for 5-10 min at room temp with shaking.



Zika IgM antibody Positive Human Serum | **Zika IgM antibody Negative Human Serum**

Typical Results & Interpretations

Zika antibody +ve sample reacted with Env, NS1, and prM bands. Intensity of bands suggest higher levels of NS1 antibodies than Env and prM. No antibodies to Zika capsid were detected. The negative or controls samples must be 'negative for all bands'. If too much of the sample (e.g., 1:10) then non-specific reaction may occur. So users must optimized the sample dilution, 2-ab conjugate to make sure that control samples are negative.

In the above example, 2-ab conjugate detected 100 ng and 30 ng of human IgM in 2-ab zone. so sensitivity of detection is at least 30 ng of human IgM.

1-ab zone shows a band at 'anti-human IgG' indicating that samples were of human origin. The band at 'anti-goat IgG' developed as the host of 2-ab was 'goat'. If a mouse host was mistakenly used then the band at mouse would have been visible. No results in the Zika active zone would indicate an incorrect conjugate was used. In addition, the intensity of the bands should be about equal to the '100 ng human IgM'. Absence of a band at 'anti-goat IgG' region could be due to the use very low concentrations of the 2-ab conjugate.

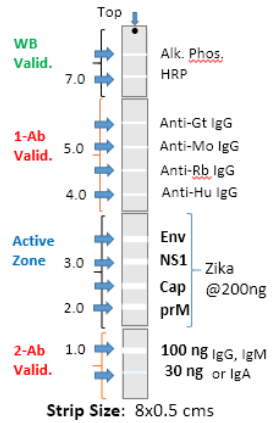
Quality Control

Recombinant Zika proteins in the active zone have been tested using appropriate poly or monoclonal available from ADI. Proteins and antibodies in the other zones (1-ab, 2-ab, WB detection) have also been tested using appropriate antibodies and WB detection reagents from ADI. These antibodies can be obtained as an added item (Listed on page 6).

We recommend that appropriate controls (negative and positive) must be used for each set of experiments.

PRINCIPLE OF THE TEST

Recombinant purified Zika antigens Envelop (Env), NS1, Capsid (Cap), and prM are striped in the Zika active zone. This zone will capture antibodies (IgG, IgM, or IgA) from the samples (human or animals). After the sample incubation, the bound antibodies will be detected by the appropriate secondary antibodies (anti-human or animal IgG or IgM)-HRP (or Alk. Phos) conjugates followed by colorimetric or chemiluminescence detection.



WBV strips also contain the following zones:
2-Ab validation zone (contains human or animal IgG or IgM at 2 levels: 100 ng and 30 ng/line). The Ig's will be detected by the 2-antibodies (anti-human or animal IgG-HRP/AP conjugate). The use of very high or low conjugate can be seen and controlled by this zone. Use appropriate concentration of conjugate so as to give concentration dependent detection of the 2 bands.

1-Ab zone contains 4 different antibodies to capture various IgG from goat (gt), Mouse (Mo), rabbit (rb) and Human (Hu). This zone is designed to identify and verify the correct concentration of primary antibodies. If uses for the detection of zika antibodies in human or animals samples then source of samples can also be verified. If used to validate various 1-ab to zika proteins (mono or poly) then the source and concentration of the reagents can also be validated.

WB validation zone contains HRP and Alk. Phosphatase reagents. If using ECL detection or colorimetric system (TMB) using HRP based detection then HRP bands must be clearly visualized. This zone validates the functioning and use of correct detection system.

TruStrip WBV use specially designed nitrocellulose, plastic backed membranes for the ease of handling. Lines are stiped at 0.5 cm intervals. TruStrip strips are supplied pre-blocked and "ready-to-use". A dot is placed to indicate the 'Top' of the strips. The backside (top) has the WBV cat# and lot#.

PRECAUTIONS

The strips contains purified proteins and antibodies in dried forms. No additives are required so MSDS is required.

STORAGE AND STABILITY

The test are stable at 2-8 ^{o}C for 1-year or until the expiration date printed on the label.

MATERIAL REQUIRED BUT NOT SUPPLIED

TruStrip WBV Zika strips do not contain any antibodies (human or animal), -ve and +ve controls and western blotting reagents (antibody conjugates and Detection reagents such as colorimetric or chemiluminescence or fluorescence detection based kits). User may supplement these reagents according to their needs or order some of the above reagents from ADI (see page 6). You may contact ADI for any assistance or need for special reagents.