



## ZIKA LABORATORY TESTING GUIDANCE (Currently, CDC is the only diagnostic testing laboratory) \*

Appropriate Clinical Specimens for Laboratory Testing of Symptomatic Patients (CDC)			
	Serum	CSF	Other <sup>¶</sup>
RT-PCR <sup>§</sup>	Yes	Yes	Yes
Serology: IgM with PRNT confirmation <sup>†</sup>	Yes	Yes	

\* CDPH is validating both PCR and IFA assays to detect Zika and currently can perform PRNT for surveillance purposes.

<sup>¶</sup> Other specimen types (e.g., urine, amniotic fluid, tissues) will be considered on a case by case basis.

<sup>§</sup> RT-PCR is the preferred method for confirming an acute case.

<sup>†</sup> PRNT (plaque-reduction neutralization test) measures virus-specific neutralizing antibodies.

### Recommended Diagnostic Testing

- For patients with acute fever, rash, myalgia, or arthralgia and travel history within the previous 2 weeks to an area with ongoing transmission, testing should be considered for the following viruses:
  - Zika
  - Chikungunya
  - Dengue
- CDPH can provide diagnostic testing (PCR and serology) for dengue and chikungunya viruses.
- CDC can perform diagnostic testing for Zika virus.
- Consult with your local public health department for possible testing.

### RT-PCR Testing

- Collect serum or CSF within 7 days of illness onset.
  - Collect at least 2 ml of serum (5-10 ml of blood) in a red top or serum separator tube.
  - For CSF, at least 1 ml is required.

### Serology: IgM and PRNT testing

- Optimal collection of acute blood is >3 days after illness onset. Serum collected within 7 days of illness onset may be falsely negative.
- If initial IgM testing is negative and Zika is strongly suspected, a second serum sample should be collected.
- IgM antibodies against Zika virus, dengue viruses, and other flaviviruses (e.g., yellow fever virus, West Nile virus) have cross-reactivity possibly generating false positive results in serological tests; therefore, all IgM positive samples will be reflexed to PRNT to discriminate among these viruses.

**Other tissues:** Consult with VRDL prior to collecting other tissues for testing.

### Specimen storage and shipping

- Store all specimens at 4°C. Ship on cold pack within 24 to 72 hours. If longer, process serum, store and ship at -70°C or colder.

### Specimen shipment – Complete 2 forms

- VRDL General Purpose Specimen Submittal Form Lab 300:  
[https://www.cdph.ca.gov/programs/vrdl/Documents/VRDL\\_General\\_Human\\_Specimen\\_Submittal\\_Form\\_Lab300.pdf](https://www.cdph.ca.gov/programs/vrdl/Documents/VRDL_General_Human_Specimen_Submittal_Form_Lab300.pdf)
  - 2016 version of CDC DASH form with your public health laboratory contact information as the Intermediate Submitter.
    - Date of onset, **required**
    - Detailed travel history including dates and stopovers, **required**
    - Clinical symptoms, **required** (CDC and VRDL will not test asymptomatic patients unless there is ultrasound evidence of microcephaly or intracranial calcifications)
    - Pregnancy status, **requested** (testing will be expedited for pregnant women)
    - Select Arbovirus Serology for the test request and specify Zika testing in the clinical information.
- Please email an electronic copy to [VRDL.submittal@cdph.ca.gov](mailto:VRDL.submittal@cdph.ca.gov).
  - Specimens sent to VRDL will be tested for dengue and chikungunya viruses and an aliquot will be sent to CDC for Zika virus testing.

**Ship specimens to:** Specimen Receiving  
CDPH VRDL  
850 Marina Bay Parkway  
Richmond, CA 94804

**Questions** about specimen collection, submittal, or shipping: Please contact the VRDL Medical and Epidemiology Liaison Section, (510) 307-8585, or email [VRDL.submittal@cdph.ca.gov](mailto:VRDL.submittal@cdph.ca.gov).

**Other resources:** <http://www.cdc.gov/zika/index.html>