

TEST: VARICELLA-ZOSTER IgG

PRINCIPLE:

Varicella (chickenpox) and zoster (shingles) represent different clinical manifestations of infection with the same agent, Varicella-zoster virus (VZV), a member of the *Herpesviridae*.

Varicella occurs most frequently in children and is characterized by a generalized vesicular exanthema often accompanied by fever. Zoster usually occurs in adults or immunocompromised patients (including those with AIDS) and consists of painful, circumscribed eruption of vesicular lesions with accompanying inflammation of associated dorsal root or cranial nerve sensory ganglia. Varicella is the primary infection with VZV, whereas zoster is a secondary infection due to reactivation of latent VZV sensory ganglia.

This test is used to determine a prior exposure to VZV and to aid in the determination of acute or convalescent stage of VZV infection. There are several situations in which providing a specific laboratory diagnosis of VZV infection is crucial. The first is in patients who are receiving immunosuppressive therapy or who have abnormalities in their cell-mediated immune responses and the second is in children receiving chemotherapy and radiotherapy for cancer. VZV infection in these cases may cause severe disease or be fatal. Providing a specific diagnosis of VZV infection in these cases may guide in the administration of anti-viral agents or other treatments.

SPECIMEN REQUIREMENTS:

2ml serum collected in a red top tube with no additive or in a serum separator tube (gel barrier).

Separated serum should not be at room temperature no longer than 8 hours. If assays are not completed within 8 hours, the serum should be refrigerated (2°-8° C). If assays are not completed beyond 48 hours, samples are to be frozen at -20° C.

METHOD: ELISA

REFERENCES:

1. Gershon, A.A., LaRussa, P. and Steinberg, S. P. 1995. Varicella-Zoster Virus. In: Manual of Clinical Microbiology. Murray, P.R., Baron, E.J., Tenover, F.C. and Tenover, F.C. (eds). 6th Edition, ASM Press, Washington, DC. p.895-904.
2. Heath R. B. 1987. Varicella-Zoster. In: Principle and Practice of Clinical Virology. Zuckerman, A.J., Banatvala, J. E. and Pattison, J.R. (eds) John Wiley and Sons Ltd., New York, p51-73.
3. Arvin, A. M., Koropchak, C.M. and Wittek, A. E. 1983. Immunologic Evidence of Reinfection with Varicella-Zoster Virus. J. Infect. Dis. 148, No. 2: 200-205.

NORMAL RANGE:

Clinical Interpretation of immune status:

Negative: < 15.0 IU/ml (Presumed Non-Immune)

Equivocal: 15.0-19.9 IU/ml

Positive: >= 20.0 IU/ml (Presumed Immune)

The following results were obtained with the Diamedix Immuosimplicity Varicella- Zoster IgG EIA Test System. The magnitude of the measured result, above the cut-off, is not indicative of antibody present. The magnitude of the reported IgG level cannot be correlated to an end-point titer. The test reliably measures immunity due to previous infection but is unstable for the detection of post-vaccination immune status.

Turnaround time: One Week