

Heparin Dependent Platelet Antibody - PF4 ELISA

Versiti offers two Platelet Factor Four Enzyme Linked Immunosorbent Assays (PF4 ELISA) for detection of Heparin-Dependent Platelet Antibodies. Heparin-induced thrombocytopenia (HIT) associated with thrombosis is an immune complex mediated disorder that can cause morbidity and mortality in patients receiving heparin therapy. Prompt diagnosis is paramount to appropriate patient management.

Indications for testing:

The diagnosis of HIT is suspected when:

- a sustained decline in the platelet count occurs during heparin therapy,
- the platelet count recovers after heparin is discontinued, and
- no other causes of thrombocytopenia are evident.

PF4 ELISA - IgG - Detection of heparin-dependent platelet antibodies in patients demonstrating clinical findings consistent with HIT with or without thrombosis. PF4 ELISA - IgA and IgM PF4 ELISA- Detection of rare clinically relevant antibodies of the IgM and IgA isotypes in patients demonstrating compelling clinical findings consistent with HIT, yet have a weak or negative result in the PF4 ELISA - IgG.

Test method:

The PF4 ELISA is a solid phase assay based on the reaction of patient antibody with complexes of PF4 and a polyanionic compound (PVS), which is used as a substitute for unfractionated heparin (UFH). Bound patient antibody is detected with a secondary antibody specific for human IgG, IgA, or IgM. Positive reactions are confirmed by demonstrating inhibition of antibody binding with excess heparin.

Assay sensitivity and limitations:

- Weakly reactive heparin-dependent antibodies, while not present in normal control sera, can be detected in the sera of patients with recent or current exposure to heparin. However, they will have a lower likelihood of being associated with clinical HIT compared with more potent antibodies.
- The assays are not appropriate for detection of antibodies with low molecular weight heparin.

Reporting of results:

Positive - Optical density value > 0.400 that inhibits by 49% or more for IgG and IgA and optical density value > 0.570 that inhibits by 30% or more for IgM in the presence of high dose (100 U/ml) UFH.

O.D. values are reported. The first value demonstrates antibody binding, and the second value demonstrates inhibition by heparin.

Results will be reported as negative, see interpretation, positive, or strong positive for heparin-dependent antibody.

Specimen requirements:

5 ml refrigerated serum sample must be received within 7 days of draw date. Older samples are acceptable if they have been frozen.





SHIP

Shipping requirements:

Place the specimen and the test requisition form in sealed plastic bags, and surround with cold packs in a Styrofoam container. Place the sealed Styrofoam container in a sturdy cardboard box and tape securely. Ship the package in compliance with your overnight carrier guidelines.

Label with the following address:

Versiti Client Services
Platelet and Neutrophil Immunology Laboratory
638 N. 18th Street
Milwaukee, WI 53233
800-245-3117, ext. 6250



ORDER

Required forms:

Please complete all pages of the [requisition form](#).

CPT Codes/Billing/Turnaround time:

Test code: 5510: Heparin Dependent Platelet Antibody - IgG (PF4 ELISA)

5514: Heparin-Dependent Platelet Antibody (PF4 ELISA) - IgA/M Panel

CPT codes: For recommended CPT codes, visit the [versiti.org/test-catalog](https://www.versiti.org/test-catalog)

Turnaround time:

Heparin Dependent Platelet Antibody - IgG (PF4 ELISA): 1-2 days

Heparin Dependent Platelet Antibody - IgA/IgM Panel (PF4 ELISA): 2-4 days

References:

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13. Sheridan D, et al. A diagnostic test for heparin-induced thrombocytopenia. *Blood* 1986; 67:27-30
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