

# Neonatal Alloimmune Thrombocytopenia

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**Neonatal alloimmune thrombocytopenia (NAIT) is a rare syndrome caused by maternal IgG antibody directed against a fetal platelet antigen inherited from the father. Approximately 1 in 1000 pregnancies is affected, with about half of the cases occurring in first pregnancies. Although HPA-1a (PIA1) is the dominant human platelet alloantigen (HPA) incompatibility causing NAIT, a significant number of cases are caused by other HPA incompatibilities.**

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## Included tests:

**To demonstrate antibody in maternal serum:** Maternal platelet antibody detection and identification including alloantibodies reactive with alloantigens HPA1a, -1b; HPA-2a, -2b; HPA-3a, -3b; HPA-4a, -4b; HPA-5a, -5b; HPA-15a, -15b; and other specificities on GPIIb/IIIa, GPIa/IIa, GPIb/IX, and GPIV. A crossmatch of maternal serum against paternal platelets is also performed to detect antibodies against low frequency and new HPA. Reactivity against Class I HLA antigens is also detected.

**To demonstrate parental HPA incompatibility:** Maternal and paternal HPA genotyping including alleles of HPA-1 through 6, HPA-9 and HPA-15.

**Initial testing on Only Maternal sample (5303):** Includes Platelet Antigen Genotyping Panel of mother and Platelet Antibody Identification Panel of mother.

**Initial testing on Maternal sample with Paternal sample (5603/5703):** Includes Platelet Antigen Genotyping Panel of mother and father and Platelet Antibody Identification Panel of mother including crossmatches.

**Serial Monitoring testing on Maternal and Paternal samples (5640):** Includes Platelet Antibody Identification

Panel of mother including crossmatches of mother's serum against father's platelets.

Serial Monitoring testing on Maternal only (5630): Includes Platelet Antibody Identification Panel of mother.

## Test method:

Antibody Detection - Flow Cytometry, Platelet Antibody Bead Array (PABA), Monoclonal Antibody Immobilization of Platelet Antigen (MAIPA)

HPA Genotyping - PCR + fluorescent allele – specific hydrolysis probes.

## Specimen requirements:

Initial testing of Maternal sample with Paternal sample (5603/5703)

- 30-40 mL ACD-A whole blood and 10 mL serum from mother
- 30-40 mL ACD-A whole blood from father

Initial testing of Maternal sample ONLY (5303)

- 30-40 mL ACD-A whole blood and 10 mL serum from mother

Serial Monitoring of Maternal sample with Paternal Crossmatching (5640)

- 10 mL serum from mother
- 30-40 mL ACD-A whole blood from father

Serial Monitoring of Maternal sample Only (5630)

- 10 mL serum from mother

Note: Whole blood samples must be received within 4 days of collection.



## SHIP

### Shipping requirements:

Ship on an ice pack. Protect whole blood from freezing by wrapping in paper towels. Place the specimen and the test requisition into plastic bags and seal. Insert into an insulated container, place in a sturdy cardboard box, tape securely, and ship by overnight carrier. Ship the package in

compliance with your overnight carrier guidelines. Label box 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 codes:** 5303, 5603, 5703, 5640, 5630

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

**Turnaround time:** 10 days

