**Lab Dept:** Transfusion Services  

**Test Name:** NAIT – NEONATAL ALLOIMMUNE THROMBOCYTOPENIA INITIAL SCREEN MATERNAL & PATERNAL

### General Information

**Lab Order Codes:**  
Mother/Maternal: NAITM  
Father/Paternal: NAITP

**Synonyms:** N/A

**CPT Codes:**  
Mother:  
81400 x8 – Molecular Pathology Level 1  
86022 – Antibody Identification, platelet antibodies  

Father:  
81400 x8 – Molecular Pathology Level 1

**Test Includes:**  
Maternal platelet antibody detection and identification including alloantibodies reactive with alloantigens HPA-1a, -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.

Maternal and paternal HPA genotyping including alleles of HPA-1 through 6, HPA-9 and HPA-15.

### Logistics

**Test Indications:** To demonstrate parental HPA incompatibility.

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.

**Lab Testing Sections:** Transfusion Services - Sendouts

**Referred to:** Blood Center of Wisconsin (Tests:5603/5703)

**Phone Numbers:** MIN Lab: 612-813-6280
STP Lab: 651-220-6550

**Test Availability:** Monday – Friday ONLY

**Turnaround Time:** 10 days

**Special Instructions:** Both parents should be drawn. Please have both register and orders places for each. Testing should be collected Monday – Friday ONLY.

### Specimen

**Specimen Type:** Blood

**Container:**

- **Mother:** Yellow ACDA (Solution A) and Red Top NO GEL
- **Father:** Yellow ACDA (Solution A)

Alternate: Blue (NaCit) tops can be substituted for the Yellow tubes, but Yellow is preferred.

**Draw Volume:**

- **Mother:** 60 mL (min: 30 mL), please try to draw the full volume
- **Yellow ACDA:** 30 mL (min: 20 mL)
- **Red NO GEL:** 30 mL (min: 10 mL)

- **Father:** 30 mL (min: 20 mL), please try to draw the full volume
- **Yellow ACDA:** 30 mL (min: 20 mL),

**Processed Volume:**

- **Mother:**
  - Yellow ACDA: Do not process, submit as whole blood in original containers
  - Red NO GEL: 10 mL (2 mL) serum

- **Father:**
  - Yellow ACDA: Do not process, submit as whole blood in original containers

**Collection:** Routine venipuncture

**Special Processing:**

- **Lab Staff:**
  - **Mother:**
    - Yellow ACDA: Do not process, submit as whole blood in original containers
    - Red NO GEL: Centrifuge specimen, remove serum aliquot into a screw-capped round bottom plastic vial.
    - Make sure specimens are clearly labeled as “Mother” with mother’s name and demographics.
  - **Father:**
    - Yellow ACDA: Do not process, submit as whole blood in original containers
    - Make sure specimens are clearly labeled as “Father” with father’s name and demographics.

Ship specimens in same shipment in separate bags for mother and father at
refrigerated temperatures, Monday-Friday, NEXT DAY Delivery. Mark box “Refrigerate upon collect”. Blood Center of Wisconsin accepts Saturday deliveries.

Ship to:
Client Services/PNIL
Blood Center of Wisconsin
638 North 18th Street
Milwaukee, WI 53233-2121

Phone: 1-800-245-3117, ext.6250

Patient Preparation: None
Sample Rejection: Mislabeled or unlabeled specimens; frozen specimens

Interpretive

Reference Range: An interpretive report will be provided.
Critical Values: N/A
Limitations: N/A
Methodology: Antibody detection: Flow cytometry, Platelet Antibody Bead Array (PABA), Monoclonal Antibody Immobilization of Platelet Antigen (MAIPA)

HPA Genotyping-PCR + fluorescent allele – specific hydrolysis probes

References: Blood Center of Wisconsin March 2017