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**Lab Dept:** Transfusion Services

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

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***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.

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***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.

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### ***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 18<sup>th</sup> Street  
Milwaukee, WI 53233-2121

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

**Patient Preparation:** None

**Sample Rejection:** Mislabeled or unlabeled specimens; frozen specimens

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***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