Cincinnati Children's

MOLECULAR GENETICS, NEPHROLOGY AND CANCER & BLOOD DISEASES INSTITUTE CLINICAL LABORATORIES

For test inquiries please call: 513-636-4530 • Fax: 513-803-5056
Email: nephclinicallab@cchmc.org • www.cincinnatichildrens.org/tma

THROMBOTIC MICROANGIOPATHY (aHUS and TTP) TEST REQUISITION

All Information Must Be Completed Before Sample Can Be Processed

PATIENT INFORMATION

Patient Name: _____ , _____ , _____
Last First MI

Address: _____

_____

Home Phone: _____

MR# _____ Date of Birth _____ / _____ / _____

Gender: Male Female

ETHNIC/RACIAL BACKGROUND (Choose All)

☐ European American (White)
☐ African-American (Black)
☐ Native American or Alaskan
☐ Asian-American
☐ Pacific Islander
☐ Ashkenazi Jewish ancestry
☐ Latino-Hispanic _____
(specify country/region of origin)
☐ Other _____
(specify country/region of origin)

BILLING INFORMATION (Choose ONE method of payment)

☐ REFERRING INSTITUTION

Institution: _____

Address: _____

City/State/Zip: _____

Accounts Payable Contact Name: _____

Phone: _____

Fax: _____

Email: _____

☐ COMMERCIAL INSURANCE*

Insurance can only be billed if requested at the time of service.

Policy Holder Name: _____

Gender: _____ Date of Birth _____ / _____ / _____

Authorization Number: _____

Insurance ID Number: _____

Insurance Name: _____

Insurance Address: _____

City/State/Zip: _____

Insurance Phone Number: _____

*** PLEASE NOTE:**

- We will not bill Medicaid, Medicaid HMO, or Medicare except for the following: CCHMC Patients, CCHMC Providers, or Designated Regional Counties.
- If you have questions, please call 1-866-450-4198 for complete details.

REFERRING PHYSICIAN

Physician Name (print): _____

Address: _____

Phone: (_____) _____ Fax: (_____) _____ Email: _____

Genetic Counselor/Lab Contact Name: _____

Phone: (_____) _____ Fax: (_____) _____ Email: _____

_____ Date: ____/ ____/ _____

Referring Physician Signature (REQUIRED)

☐ Patient signed completed ABN

Medical Necessity Regulations: At the government's request, the Molecular Genetics Laboratories would like to remind all physicians that when ordering tests that will be paid under federal health care programs, including Medicare and Medicaid programs, that these programs will pay only for those tests the relevant program deems to be (1) included as covered services, (2) reasonable, (3) medically necessary for the treatment and diagnosis of the patient, and (4) not for screening purposes.

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Patient Name: _____ Date of Birth: _____

CLINICAL AND LABORATORY INFORMATION (If Available)

Is the patient receiving plasma infusion or plasmapheresis?: ☐ Yes ☐ No

If yes, date: _____

Proband	Family	
☐	☐	Renal disease
☐	☐	Neurological disease
☐	☐	Other: _____

Platelets: _____ Schistocytes: ☐ Yes ☐ No

LDH: _____ Haptoglobin: _____

Bilirubin: _____

Creatinine: _____

C3: _____ C4: _____

SAMPLE/SPECIMEN INFORMATION

Collection Date: _____

Time: _____

Has patient received a bone marrow transplant? ☐ Yes ☐ No

If yes, date of bone marrow transplant _____

Percent engraftment _____

Please send saliva kit and two cytobrushes. Note: STR analysis at an additional charge is required on cytobrushes and saliva samples obtained on all patients post BMT.

TEST(S) REQUESTED††

Thrombotic Microangiopathy (aHUS and TTP) Profile

☐ **Thrombotic Microangiopathy (aHUS and TTP) Profile**
(Includes C3, C4, Factor H, Factor I, Factor B, Factor H autoantibody, ADAMTS13 activity, MCP/CD46 FACS)

Sample Requirements:
- 3mL ACD A/B whole blood – room temp, deliver within 24 hours
- 1 mL serum - frozen
- 1 mL ppp† (no EDTA) - frozen

☐ **C3**	0.5 mL serum	frozen
☐ **C4**	0.5 mL serum	frozen
☐ **Factor B**	0.5 mL serum	frozen
☐ **Factor I**	0.5 mL serum	frozen
☐ **Factor H**	0.5 mL serum	frozen
☐ **Factor H Auto-Antibody**	0.5 mL serum	frozen
☐ **ADAMTS13 Activity**	1 mL ppp† (no EDTA)	frozen

☐ **Membrane Cofactor Protein (MCP) / CD46 Expression by Flow Cytometry** 3 mL ACD A/B whole blood room temp
Note: If ordered, sample must be sent by next-day shipping.

Eculizumab Monitoring

☐ **Eculizumab Pharmacokinetic Assay** 1 mL serum frozen
(Includes Eculizumab level and CH50. For assessing complement activation and to assist in monitoring patients on eculizumab therapy)

☐ **Eculizumab Level** 0.5 mL serum frozen

Complement Activation Testing

☐ **CH50 (total hemolytic complement)** 0.5 mL serum frozen

☐ **Bb**	0.5 mL plasma (serum also accepted)	frozen sep. aliq.
☐ **SC5b-9 (MAC)**	0.5 mL EDTA plasma	frozen sep. aliq.
☐ **C5a**	0.5 mL EDTA plasma	frozen sep. aliq.
☐ **C3a**	0.5 mL EDTA plasma	frozen sep. aliq.

†PPP= Platelet Poor Plasma. See page 3 for instructions.
*Call for other acceptable specimen types.

ADAMTS13 Testing

☐ **ADAMTS13 Panel**
(ADAMTS13 Activity, ADAMTS13 Inhibition Test, ADAMTS13 Antibody Quant)

Sample Requirements:
- 1 mL ppp† (no EDTA) - frozen
- 1 mL serum - frozen

☐ **ADAMTS13 Activity**	1 mL ppp† (no EDTA)	frozen
☐ **ADAMTS13 Inhibition Test**	1 mL ppp† (no EDTA)	frozen
☐ **ADAMTS13 Antibody Quant**	1 mL serum	frozen

Thrombotic Microangiopathy (aHUS and TTP) Genetic Testing

☐ **aHUS Genetic Susceptibility Panel**
(includes sequence analysis of *C3, CFB, CFH, CFHR1, CFHR3, CFHR5, CFI, DGKE, MCP, THBD* and MLPA analysis for *CFHR1/CFHR3* deletion)

☐ *CFHR1/CFHR3* deletion analysis by MLPA

☐ Reflex to deletion/duplication of *C3, CFB, CFI, DGKE* and *THBD*

☐ Reflex to deletion/duplication of single gene(s)[1] (specify): _____

_____

[1]Deletion/Duplication analysis of *CFH, CFHR5,* or *MCP* is not available at this time.

Sample Requirements:
- 3 mL whole blood - room temp

☐ **Each gene listed above is also available for order as an individual test** 3 mL whole blood room temp*

Specify gene name: _____

☐ ***ADAMTS13* gene sequencing** 3 mL whole blood room temp

☐ **Targeted (family specific) mutation analysis** 3 mL whole blood room temp*

Gene of interest _____

Proband's name _____

Proband's DOB _____

Proband's mutation _____

Please call 513-636-4474 to discuss any family-specific mutation analysis with genetic counselor prior to shipment.

††Please see page three of requisition for sample and shipping information.

SHIP SAMPLES TO: 3333 Burnet Avenue NRB 1042, Cincinnati, OH 45229

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Patient Name: _____ Date of Birth: _____

TMA TESTING INFORMATION SHEET

SHIP SAMPLES TO: 3333 Burnet Avenue NRB 1042, Cincinnati, OH 45229
LOCAL OR COURIER SAMPLES: deliver to NRB 1013

Test Name	Performing Lab	Specimen Requirements	TAT/ Days Performed	CPT Codes
ADAMTS13 Activity	Nephrology 513-636-4530	1 mL platelet poor plasma Na Cit/Li Hep only (no EDTA)-spun, separated, frozen within 2 hrs of collection; ship on dry ice	24 hours	85397
ADAMTS13 Antibody Quant	Nephrology 513-636-4530	1 mL red top serum spun, separated, frozen within 2 hrs. of collection; ship on dry ice*	48 hours	85320
ADAMTS13 Gene Sequencing	Molecular Genetics 513-636-4474	3mL EDTA – whole blood- room temperatire	4 weeks	81479
ADAMTS13 Inhibition Test	Nephrology 513-636-4530	1 mL platelet poor plasma Na Cit/Li Hep only (no EDTA)-spun, separated, frozen within 2 hrs of collection; ship on dry ice	24 hours	85335
ADAMTS13 Panel	Nephrology 513-636-4530	1 mL platelet poor plasma Na Cit/Li Hep only (no EDTA)-spun, separated, frozen within 2 hrs of collection; ship on dry ice	24 hours	85397 +85335 +85320
aHUS Genetic Susceptibility Panel *(C3, CFB, CFH, CFHR1, CFHR3, CFHR5, CFI, DGKE, MCP, THBD)*	Molecular Genetics 513-636-4474	3 mL EDTA – whole blood- room temperature*	42 days	81479x10
Any single gene sequencing test	Molecular Genetics 513-636-4474	3 mL EDTA – whole blood- room temperature*	Up to 12 weeks	81479
Targeted mutation analysis	Molecular Genetics 513-636-4474	3 mL EDTA – whole blood- room temperature*	4 weeks	81403
C3	Nephrology 513-636-4530	0.5 mL red top serum- spun, separated, frozen within 2 hrs of collection; ship on dry ice	24 hours/ daily	86160
C4	Nephrology 513-636-4530	0.5 mL red top serum- spun, separated, frozen within 2 hrs of collection; ship on dry ice	24 hours/ daily	86160
CH50	Nephrology 513-636-4530	0.5 mL red top serum- spun, separated, frozen within 2 hrs of collection; ship on dry ice	24 hours/ Mon, Wed, Fri	86162
Eculizumab Level	Nephrology 513-636-4530	0.5 mL red top serum- spun, separated, frozen within 2 hrs of collection; ship on dry ice	24 hrs/ Mon, Wed, Fri	80299
Factor B	Nephrology 513-636-4530	0.5 mL red top serum- spun, separated, frozen within 2 hrs of collection; ship on dry ice	3 days, Mon, Fri	86160
Factor H	Nephrology 513-636-4530	0.5 mL red top serum- spun, separated, frozen within 2 hrs of collection; ship on dry ice	3 days/ Mon, Fri	86160
Factor H Auto-Antibody	Nephrology 513-636-4530	0.5 mL red top serum- spun, separated, frozen within 2 hrs of collection; ship on dry ice	24 hours/ Mon, Thurs stat available	83516
Factor I	Nephrology 513-636-4530	0.5 mL red top serum- spun, separated, frozen within 2 hrs of collection; ship on dry ice	3 days/ Mon, Fri	86160
Bb	Nephrology 513-636-4530	0.5 mL EDTA plasma (serum also accepted)– spun, separated, frozen within 2 hrs of collection, separate aliquot each test; ship on dry ice	1 week	86160
Membrane Cofactor Protein (MCP)/CD46 by Flow	Cancer and Blood Disease Institute 513-636-4685	3mL ACD (A or B) whole blood- room temperature, MUST be delivered within 24 hours of collection Mon-Fri only	24 hours	86356x3
SC5b-9 (MAC Complex)	Cancer and Blood Disease Institute 513-803-3503	0.5 mL EDTA plasma – spun, separated, frozen within 2 hrs of collection, separate aliquot each test; ship on dry ice	1 week	86160
C3a	Cancer and Blood Disease Institute 513-803-3503	0.5 mL EDTA plasma – spun, separated, frozen within 2 hrs of collection, separate aliquot each test; ship on dry ice	2 weeks	86160
C5a	Cancer and Blood Disease Institute 513-803-3503	0.5 mL EDTA plasma – spun, separated, frozen within 2 hrs of collection, separate aliquot each test; ship on dry ice	2 weeks	86160

DO NOT FREEZE SAMPLES FOR GENETIC TESTING.
If you need specific instructions for platelet poor plasma, please call 513-636-4530.
*Call for other acceptable specimen types.