

UCSF Clinical Laboratories Reflex Testing

In certain circumstances, when an initial test result is positive or outside normal parameters, it may be medically appropriate to perform a second related test (reflex testing). Such reflex testing is continually updated in the UCSF Clinical Laboratories Test Database <<http://labmed.ucsf.edu/labmanual/mftlng-mtzn/test/test-index.html>>. Questions regarding reflex testing should be directed to the specific testing section. As of 11/15/16, the following tests, performed by the UCSF Clinical Laboratories, have associated reflex testing:

Test name	Performed by	Reflex Criteria
Rh only	Blood Bank	Cord blood: If baby and mother are both Rh Negative on initial testing, weak D testing will be automatically performed on the cord sample.
ABO and Rh Typing Panel	Blood Bank	Cord blood: If baby and mother are both Rh Negative on initial testing, weak D testing will be automatically performed on the cord sample.
Antibody Identification	Blood Bank	Additional procedures will be performed at an added charge if the routine procedure (ABID) is insufficient. If an antibody which is capable of causing Hemolytic Disease of the Newborn is identified, a determination of the antibody titer will automatically be ordered.
Antibody Screen, RBC	Blood Bank	If the screening test is positive, a test to identify the antibody will automatically be initiated.
Coombs, Direct, Polyspecific	Blood Bank	If positive specific testing to determine if the reactivity is due to Complement or IgG is automatically performed.
Fetal Bleed Screen	Blood Bank	If positive, the sample is referred to hematology for Kleihauer-Betke testing to determine the extent of the bleed and to calculate the Rhogam dosage.
Type and Screen	Blood Bank	ABO/Rh confirmation (a one-time requirement) is required before blood products can be set up. To minimize delays in product availability, if the provider mistakenly places an order for a duplicate Type and Screen test, the Blood Bank will reflexively convert that order to an ABO/Rh confirmation test (test code CHEK).
Antibody screen and identification	Blood Bank	If the screening test is positive, a test to identify the antibody will automatically be initiated. If an antibody which is capable of causing Hemolytic Disease of the Newborn is identified, a determination of the antibody titer will automatically be ordered.
HIV Rapid Antibody Screen	Blood Gas lab	If positive a HIV differentiation using the "HIV-1/2 Antibody Differentiation" test will automatically be performed.
Hemoglobinopathy Evaluation	China Basin Chemistry	If variant hemoglobin is detected by HPLC or capillary electrophoresis, hemoglobin electrophoresis may need to be performed to characterize the abnormality.
Alpha-fetoprotein, amniotic fluid (with reflex to Acetylcholinesterase and Hgb F)	China Basin Chemistry	Based on AFP result the sample will also be tested for acetylcholinesterase and fetal hemoglobin.
Urinalysis, Macroscopic	Hematology	Samples submitted with orders for Urinalysis with microscopic examination (UAWM) that are negative for Protein, Hemoglobin, Leukocyte esterase AND Ascorbic acid (Vit. C) will not be evaluated microscopically. The UAWM will be canceled and just the Macroscopic urinalysis (UA) will be charged. Samples submitted with orders for Urine macroscopic only (UA) that are positive for ascorbic acid (Vit. C) but negative for hemoglobin will be evaluated microscopically to rule out the presence of red cells. The UA will be canceled and a Urinalysis with microscopic examination will be ordered and billed.
Anti-Nuclear Antibodies	Immunology	Positive samples will automatically be titered.
Lyme Disease Antibody Total (EIA)	Immunology	Western Blot confirmation is automatically performed on all EIA positive tests.

Hepatitis B Surface Antigen	Immunology	A confirmatory test will automatically be run on all positive specimens.
Non-treponemal (RPR) for Monitoring (New test)	Immunology	If positive, titer will be performed.
Treponemal Antibody Screen	Immunology	If positive a non-treponema test (RPR) and titer will be performed. If screening test is positive and RPR is negative, a separate Treponemal pallidum Antibody test will be sent (TPPA).
VDRL, CSF	Immunology	Titers are automatically performed on all positive samples.
HIV Antibody and Antigen Combination Test	Immunology	HIV-1/2 Antibody Differentiation will automatically be performed on all positive samples. Indeterminate or negative results on the secondary assay will be reflex to HIV-1 NAT testing (send out test).
Human Papilloma Virus High-Risk DNA Types with Reflex HPV 16/18	Immunology	Lab will automatically perform HPV Genotyping 16/18 on positive specimens when this test is ordered. To not have test automatically reflex to test for HPV 16/18 order HPVNO
(HCVSP) Hepatitis C Antibody with reflex to HCV RT-PCR	Immunology	Positive HCV Antibody will automatically reflex to HCVRT test.
Chromosome Analysis	Medical Genomics - Cytogenetics	If an abnormality is detected ta Cytogenetics Director will determine the appropriate additional studies (e.g. C-banding, NOR) to be performed to characterize the abnormality. If additional metaphases are required for final interpretation additional counts will be performed.
Aneuvysion FISH	Medical Genomics - Cytogenetics	If an abnormality is detected the Director will determine the appropriate additional studies to be performed to characterize the abnormality.
Metaphase / Interphase FISH	Medical Genomics - Cytogenetics	If an abnormality is detected the Director will determine the appropriate additional studies to be performed to characterize the abnormality.
Subtelomere FISH	Medical Genomics - Cytogenetics	If an abnormality is detected the Director will determine the appropriate additional studies to be performed to characterize the abnormality.
Aneuvysion FISH 18/XY	Medical genomics - Cytogenetics	If an abnormality is detected the Director will determine the appropriate additional studies to be performed to characterize the abnormality.
Aneuvysion FISH 13/21	Medical genomics - Cytogenetics	If an abnormality is detected the Director will determine the appropriate additional studies to be performed to characterize the abnormality.
Cystic Fibrosis, common mutations	Medical Genomics - Molecular Diagnostics	5/7/9T Polymorphism test is performed if sample shows R117H mutation
PML-RARA, Qualitative	Medical Genomics - Molecular Diagnostics	If a translocation is detected the quantitative assay (PMLQNT) will be performed. Note: If the patient has a prior positive qualitative test (PMLR), the order will be changed to the quantitative test (PMLQNT).
PML-RARA Translocation Quantitative	Medical Genomics - Molecular Diagnostics	If the PML-RARA Quantitative test (PMLQNT) is ordered and the patient has not had a prior qualitative test (PMLR) performed, the qualitative analysis will be performed first to identify if a translocation is present and what type it is prior to quantitative analysis.
C9ORF72 Repeat Expansion	Medical Genomics - Molecular Diagnostics	Positive expansions are reflexed to a Southern blot based-assay that will determine the approximate ranges of the expanded repeat.
Cryptococcal antigen	Microbiology	Positive results are titered at a separate charge (B254).
Mycobacterial Smear	Microbiology	A first positive sputum smear is automatically referred to the state public health laboratory for M. TB testing by molecular probe.

Streptococcus Group A Antigen	Microbiology	Negative samples are automatically reflexed to culture at an additional charge.
Shiga Toxin Assay	Microbiology	Culture for E. coli O157 and Shiga Toxin Assay is automatically performed on stools submitted for bacterial culture, and are billed separately.
Clostridium difficile	Microbiology	PCR for toxin will be performed, and billed separately, when the rapid membrane EIA is positive for only GDH antigen or only toxin.
Staph aureus Culture	Microbiology	Susceptibility testing is performed if Staphylococcus aureus is isolated.
Bacterial Culture	Microbiology	If bacteria are detected they are identified and susceptibility testing is performed as appropriate.
AFB Culture, Cystic Fibrosis Respiratory	Microbiology	Mycobacterium tuberculosis complex DNA is automatically performed on respiratory specimens with positive smears.
AFB Respiratory Culture	Microbiology	If an abnormality is detected the Director will determine the appropriate additional studies to be performed to characterize the abnormality.