SIGNATURE GENOMICS

TECHNICAL NOTE

Signature OncoChip™

Sample Requirements and Turn-Around TImes

Procedure for Stabilization of Peripheral Blood or Bone Marrow

Sample Requirements and Turn-Around Times

Signature OncoChip™

SAMPLE TYPE	QUANTITY REQUIRED	TURN-AROUND TIMES*
Extracted DNA	3µg DNA	5–7 days
Peripheral Blood *(submit only if marrow unobtainable)*	1 x EDTA vacutainer containing 5cc whole blood	5–7 days
Bone Marrow	1 x EDTA vacutainer containing 1–3cc	5–7 days
Lymph Node	3mm x 3mm biopsy in sterile media or saline	5–7 days

OncoFISH

OncoFISH is used only for the confirmation or monitoring of abnormalities after Signature OncoChip™

SAMPLE TYPE	QUANTITY REQUIRED	TURN-AROUND TIMES*
Fixed Cell Pellet	*In Carnoy's fixative*	7–10 days
Unstained Slides	*One slide per FISH probe set requested*	7–10 days

General Specimen Handling Instructions

- Please follow the procedure and use kit-included reagents for the stabilization of peripheral blood or bone marrow samples for use on the Signature OncoChip™. Protocol is located on page 2 of this form or online at www.signaturegenomics.com
- Label all tubes/ flasks with patient name and date of birth, and enclose completed paperwork. Include previous cytogenetic reports.
- Samples should be shipped at room temperature in a rigid, leak-proof container by overnight delivery. Delayed shipment of sample or inappropriate temperatures may result in longer processing time or sample failure. Please notify Laboratory of courier tracking number.
- Microarray turn-around times are usually 7 days for sufficient samples. If culturing is needed, or if other services are requested, turn-around times may be longer. Samples received prior to 12:00pm (PT) are processed the same day, whereas samples received in the afternoon are processed the next working day.
- For paraffin- or formalin-embedded tissue, please contact Signature Genomics.
- Please contact Signature Genomics at 509.474.6840 with additional questions.

* *Turn-around times are approximate and based on receipt of adequate sample. Other services at Signature Genomics, such as cell culturing, culture expansion, karyotyping, or FISH confirmation, may increase turn-around times.*

‡ *Additional CPT codes may be billed if the sample received does not meet Signature Genomics specimen requirements.*

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Procedure for Stabilization of Peripheral Blood or Bone Marrow

This procedure is for the stabilization of peripheral blood or bone marrow samples for use on the Signature OncoChip™. The amount of sample necessary is 150µl of peripheral blood or bone marrow (or the amount equivalent to 2-6 million cells if cell count is available). Please follow the procedure and use specimen kit contents provided by Signature Genomics.

Stabilization of samples using the following procedure should be done as soon as possible (within 24–48 hours), as the white blood cells can rapidly degrade, rendering poor results. Stabilizing the sample in cell lysis solution is a short procedure (about 15 minutes with incubation time) and is crucial for getting good quality, high molecular weight DNA for use on the microarray. Once the sample has been stabilized, it can be stored at room temperature and shipped to Signature Genomics for extraction and processing.

Cell Lysis Procedure

a. Fill a microcentrifuge tube with 900µl of RBC Lysis Solution.

b. Using a 1 ml syringe, draw 150µl (or the amount equivalent to 2–6 million cells if cell count is available) of whole blood or bone marrow into the syringe, and add to the tube containing RBC Lysis Solution.

c. Invert multiple times and tap ends of two tubes together for uniform mixing. After all tubes have been inverted, incubate 10 minutes at room temperature, inverting again at least once during the incubation.

d. Centrifuge at 13,000–16,000 x rpm for 30 seconds to pellet the white blood cells. Remove supernatant with a pipette and a filtered pipette tip, leaving behind the visible white pellet and about 10–20µl of liquid. Discard the supernatant into a beaker containing a 10% bleach solution.

e. Vortex tubes vigorously to resuspend cells (greatly facilitates cell lysis step).

f. Resuspend cells by adding 300µl cell lysis solution to each tube and vortex vigorously to lyse cells.

g. Ship samples at room temperature to Signature Genomics.

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