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CYTOGENETIC LABORATORY
Royal Columbian Hospital

MICROARRAY REQUISITION

330 East Columbia Street
New Westminister, BC
V3L 3W7
Tel: (604) 520-4484
Fax:(604) 520-4149

Patient Name: _____
PHN: _____ DOB: _____ Sex: _____
Hospital Number: _____ Medical Genetics#: _____
Physician: _____ BCMA# _____ Tel: _____
Additional copies to: _____

Indication:
(Analysis will not be performed unless detailed clinical information is provided).

Previous chromosome analysis.
☐ Yes ☐ No If yes, provide the name of facility, accessioning # and diagnosis:
Facility: Accessioning#
Diagnosis:

☐ Seizures (specify):

☐ Behavioural abnormalities, including autistic spectrum disorders (specify):

☐ Growth abnormalities (specify):

☐ Specific cranio-facial features / Malformations (specify):

☐ External and visceral malformations (specify):

☐ Other abnormalities (including physiological/metabolic disturbances):

☐ Intellectual Disability/Developmental delay/ Speech delay (specify):

☐ Other information - family history, other previous testing, etc.

TEST CONSENT: The information on the back of this form has been reviewed with the individual/parents who consent to the test(s) requested.

Physician / Genetic counsellor Name: Signature:

Required Specimen: Peripheral Blood

Adults: One tube Sodium Heparin (2-3 mL) & one tube EDTA (2-3 mL)
Newborns & children: One tube Sodium Heparin (1-2 mL) & one tube EDTA (1-2 mL)

Approved by: Medical Director, Cytogenetics
Effective Date: April 28, 2010

Cytogenetic Laboratory
Royal Columbian Hospital

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Pre-Test information

How is Cytogenetic Microarray testing performed?

Microarray analysis will be performed using DNA extracted from blood, The DNA is tested on a slide containing 2.7 million reference DNA fragments across the whole genome.
Testing will be performed in the Cytogenetic Laboratory at the Royal Columbian Hospital.

Why are 2 different tubes required?

The EDTA tube is used for the microarray analysis and the Sodium heparin tube is used for karyotyping and/ or confirmatory testing.
Karyotyping will be performed on probands which have not had a previous karyotype.
Accurate interpretation of the patient's microarray test results may require confirmation by one or more additional methods, including fluorescence in situ hybridization (FISH).
This can usually be performed on the initial sample, but an additional sample may be required.

Why are parental bloods required?

Analysis of parental blood specimens is necessary to help interpret the patient's microarray results and assess whether a gain or loss is clinically significant. The parental arrays are not fully analyzed; they are used to interpret the child's findings.
A detailed family history is essential when interpreting the patient's microarray results.

What is the aim of this test?

Microarray analysis is designed to detect gains or losses across the genome at a higher resolution than is possible by karyotyping.
Such gains and losses may be the cause of the child's condition.

What are the limitations of this test?

Microarray testing will NOT detect the following abnormalities:
Balanced chromosomal rearrangements such as inversions or translocations

- Regions not represented on the array
- Low level mosaicism
- Small genomic imbalances that are below resolution or current thresholds
- Gene mutations, detected using sequencing or other techniques.

Cytogenetic microarray testing may detect normal variants, usually not reported, or variants of unknown clinical significance. Thus, this test may not give a definitive answer as to the cause of the child's condition.
Many conditions cannot be ruled out on the basis of a normal microarray test result.

What other information can be derived from this analysis?

Cytogenetic microarray analysis may reveal information beyond the intended purpose of diagnosis. This may include, but is not limited to, pre-symptomatic disease susceptibility, cancer predisposition or non-paternity.

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