CANCER GENETICS INCORPORATED

Test Menu

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KARYOTYPE

Karyotype with reflex to Fluorescence in situ Hybridiation (FISH) as necessary

FLUORESCENCE IN-SITU HYBRIDIZATION (FISH)

HEMATOLOGICAL MALIGNANCIES

Acute Lymphocytic Leukemia (ALL)
B-ALL PEDIATRIC/ADULT
- 11q23 (MLL-Break Apart)
- 9p21 (CDKN2A[p16])
- t(9;22) (BCR/ABL/ASS)
- t(12;21)(ETV6/RUNX1)
- CEP 4,10,17
- 17p13 (TP53)

Acute Lymphocytic Leukemia (ALL) T-ALL
- 14q11 (TCR-Alpha/Delta Break Apart)

Acute Myeloid Leukemia (AML)
- 11q23 (MLL-Break Apart)
- t(15;17) (PML/RARA) [M3]
- t(8;21) (ETO/AML1) [M2]
- inv(16) (CBFB-Break Apart)[M4, Eos]

Anaplastic Large Cell Lymphoma (ALCL)
- 2p23 (ALK-Break Apart)

BM Transplant Monitoring
- CEP X/Y

Chronic Lymphocytic Leukemia (CLL)
- 11q22.3 (ATM)/17p13 (TP53)
- CEP6/6q23 (c-MYB)
- CEP12/13q14 (D13S319)/13q34
- t(11;14)(CCND1/IGH)

Chronic Myelogenous Leukemia (CML)
- t(9;22) (BCR/ABL/ASS)

CML in blast crisis
- t(9;22) (BCR/ABL/ASS)
- 17p13 (TP53)
- CEP8

Multiple Myeloma (MM)
- 1p/1q
- t(11;14) (CCND1/IGH)
- D5S23/D5S71/ CEP9/CEP15
- 17p13 (TP53)
- t(14;16)(IGH/MAF)
- t(4;14) (FGFR3/IGH)
- 13q14/13q34

MM CD138 - Plasma Cell Purification
- 1p/1q
- 17p13 (TP53)
- D5S23/D5S71/ CEP9/CEP15
- IGH-Break Apart*
- 13q14/13q34

* if positive, refex to: • CCND1/IGH • FGFR3/IGH • IGH/MAF • IGH/MAFB • CCND3/IGH

Myelodysplastic Syndrome (MDS)
- 5q15.2/5q31
- 20q12
- 11q23 (MLL-Break Apart)
- CEP7/7q31
- CEP8

Myeloproliferative Neoplasm (MPN)
- 4q12 (FIP1L1/CHIC2/PDGFRA)
- BCR/ABL (BCR/ABL/ASS)
- 5q33 (PDGFRB-Break Apart)
- FGFR1-Break Apart

Non-Hodgkin's Lymphoma (NHL)
- t(8;14) (MYC/IGH)
- t(11;14) (CCND1/IGH)
- 3q27 (BCL6-Break Apart)
- MALT1-Break Apart
- t(14;18) (IGH/BCL2)
- c-MYC-Break Apart
- IGH-Break Apart
- BCL2-Break Apart

SOLID TUMOR

Bladder Cancer
- UroVysion®

Brain Cancer
- 1p/19q
- PTEN

Breast Cancer
- PathVysion® (HER2/neu)
- PTEN

Cervical Cancer
- FHACT®

Gastric Cancer
- HER2 Amplification

Lung Cancer
- ALK-Break Apart
- RET
- ROS1

MOLECULAR DIAGNOSTICS

HEMATOLOGICAL MALIGNANCIES

Acute Myeloid Leukemia (AML)
- CEBPA Mutation
- c-KIT Mutation (Exon 8 and 17)
- FLT3 Mutation (ITD, D835)
- NPM1 Mutation (Exon 12)
- Focus::Myeloid™ (NGS) 54 genes
  including: CEBPA, FLT3, cKIT, NPM1, JAK2

Chronic Lymphocytic Leukemia (CLL)
- IGHV Mutation
- Focus::CLL™ (NGS) 7 genes: TP53, NOTCH1, SF3B1, BIRC3, ATM, MYD88, CARD11
- MatBA®-CLL/SLL Array-CGH
- NOTCH1 Mutation
- SF3B1 Mutation
- TP53 Mutation

Chronic Myeloid Leukemia (CML)
- ABL Kinase Domain Mutation
- BCR-ABL Quantitative & Qualitative
  - Major (p210) (IS) - Minor (p190)

Lymphoma
- B-Cell Clonality (IGH)
- BRAF Mutation
- MatBA®-DLBCL Array-CGH
- MatBA®-FL Array-CGH
- MatBA®-MCL Array-CGH
- MYD88 L265P Mutation
- NOTCH1 Mutation
- T-Cell Clonality (TCRβ & TCRγ)

Myelodysplastic Syndrome (MDS)
- Focus::Myeloid™ (NGS) 54 genes

Myeloproliferative Neoplasms (MPN)
- c-KIT D816 Mutation
- CALR Mutation
- JAK2 V617F Mutation
  - Reflex to MPL 515/505
  - Reflex to JAK2 Exon 12
- Focus::Myeloid™ (NGS) 54 genes
  including: JAK2, MPL, cKIT, CALR

SOLID TUMOR

Brain Cancer
- EGFRvIII Mutation
- IDH1 & IDH2 Mutations
- MGMT Methylation

Breast Cancer
- Focus::Oncomine™ (NGS) 35 genes

Bladder Cancer
- Focus::Oncomine™ (NGS) 35 genes

Colorectal Cancer (CRC)
- BRAF Mutation
- ERCC1 Gene Expression
- Focus::Oncomine™ (NGS) 35 genes
- KRAS Mutation
- Microsatellite Instability (MSI)
- NRAS Mutation
- PIK3CA Mutation
- TS Gene Expression
- UGT1A1 Mutation
- VEGFR2 Gene Expression

Kidney Cancer
- UroGenRA®-Kidney Array-CGH

Melanoma
- BRAF Mutation
- BRAF Mutation cobas®
- NRAS Mutation
- Focus::Oncomine™ (NGS) 35 genes

Lung Cancer
- cMET Gene Expression
- EGFR Mutation
- EGFR Mutation cobas®
- EML4-ALK RNA Fusion
- ERCC1 Gene Expression
- Focus::Oncomine™ (NGS) 35 genes
- HER2 Mutation
- KRAS Mutation
- ROS1 RNA Fusion
- RRM1 Gene Expression
- TS Gene Expression
- VEGFR2 Gene Expression

Thyroid Cancer
- BRAF Mutation
- Focus::Oncomine™ (NGS) 35 genes
- NRAS Mutation

Tissue of Origin
- Tissue of Origin® [FDA-Cleared]
- Tissue of Origin® Endometrial
- Tissue of Origin® Head & Neck

COMPLETE™ PROGRAMS

AML Complete
- Morphology
- Myeloid/Lymphoid/Acute Flow Panel
- IHC Evaluation
- Focus::Myeloid™ (NGS) 54 genes
  including: CEBPA, FLT3, cKIT, NPM1, JAK2
- Karyotype & FISH Panel

Breast Complete
- Morphology
- IHC Evaluation
- ER/PR (IHC)
- EGFR (IHC)
- Ki-67 (IHC)
- p53 (IHC)
- HER2 (Pathway®)
- HER2 (INFORM®)
- PathVysion® (HER2/NEU)

CLL Complete
- Morphology
- Lymphoid Flow Panel
- ZAP-70 (Flow)
- Focus::CLL™ (NGS) 7 genes: TP53, NOTCH1 SF3B1, BIRC3, ATM, MYD88, CARD11
- MatBA®-CLL/SLL
- IGHV Mutation
- Karyotype
- FISH Panel

CRC Complete
- Morphology
- IHC Evaluation
- p53 (IHC)
- BRAF (IHC)
- KRAS Mutation
- BRAF Mutation
- PIK3CA Mutation
- NRAS Mutation
- Microsatellite Instability (MSI)

DLBCL Complete
- Morphology
- B-Cell Lymphoma Panel (IHC)
- GCB vs. Non-GCB Subtyping (IHC)
- MYC, Ki-67 (IHC)
- Lymphoid Panel (Flow)
- MatBA®-DLBCL
- B-Cell Clonality
- Karyotype
- FISH Panel

Lung Complete
- Morphology
- IHC Evaluation
- EGFR Mutation
- KRAS Mutation
- ALK-Break Apart FISH Probe
- ROS1 FISH Probe

MDS Complete
- Morphology
- IHC Evaluation
- Myeloid/Lymphoid Flow Panel
- Focus::Myeloid™ (NGS) 54 genes
  including: CEBPA, FLT3, cKIT, NPM1, JAK2
- Karyotype
- FISH Panel

MPN Complete
- Morphology
- IHC Evaluation
- Myeloid/Lymphoid Panel (Flow)
- Focus::Myeloid™ (NGS) 54 genes
  including: CEBPA, FLT3, cKIT, NPM1, JAK2
- BCR-ABL Quantitative Assay
- FISH Panel

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Test Menu

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ANATOMIC PATHOLOGY

- Actin, α-Smooth Muscle
- Actin, Muscle Specific
- ALK1
- AFP
- Annexin A1
- Basal Cell Cocktail
- Bcl-2
- Bcl-6
- B-RAF
- Beta-catenin
- BOB-1
- BCL2-Break Apart
- Breast Triple Stain (CK5+p63+CK8/18)
- c-MET
- c-MyC
- CA 19-9
- CA 125
- Calcitonin
- Caldesmon
- Calponin-1
- Calretinin
- CEA (m)
- CEA (p)
- CD1a
- CD2
- CD3
- CD4
- CD5
- CD7
- CD8
- CD10 (CALLA)
- CD14
- CD15
- CD20
- CD21
- CD22
- CD23
- CD25
- CD30
- CD31
- CD33
- CD34
- CD35
- CD43
- CD45 (LCA)
- CD45RA
- CD45RO
- CD56
- CD61
- CD68
- CD79a
- CD99
- CD117 (c-KIT)
- CD138
- CD163
- CDX-2
- Chromogranin A
- CMV
- Cyclin D1
- Cytokeratin (CAM 5.2)
- Cytokeratin (Pan)(AE1/AE3)
- Cytokeratin 903 (34βE12)
- Cytokeratin 14
- Cytokeratin 17
- Cytokeratin 19
- Cytokeratin 20
- Cytokeratin 5 & 6
- Cytokeratin 7
- Cytokeratin 8
- Cytokeratin 8 & 18
- DBA44
- Desmin
- DOG-1
- EBER (ISH)
- E-cadherin
- EGFR
- EMA
- Ep-CAM (BER-EP4)
- ER
- Factor VIII Rel. Antigen
- Factor XIIIa
- Fascin
- FLI-1
- Foxp1
- Foxp3
- Gastrin
- GCDFP-15
- GCET-1
- GFAP
- Glucagon
- Glycophorin A
- Glypican 3
- Granzyme B
- HBME-1
- Helicobacter pylori
- HepPar-1
- HER-2/neu (IHC)
- HER-2 (ISH)
- HHV-8
- HMB-45
- HSA
- HSV I
- HSV II
- hCG
- IgA
- IgD
- IgG
- IgG4
- IgM
- Inhibin, alpha
- Insulin
- Kappa (IHC or ISH)
- Ki-67
- Lambda (IHC or ISH)
- LMO-2
- Lysozyme (muramidase)
- Mammaglobin
- MART-1/melan A
- Mast cell tryptase
- MLH1
- MOC31
- MSH2
- MSH6
- MUC2
- MUC5AC
- MUC6
- MUM1
- Myelin Basic Protein
- Myeloperoxidase (MPO)
- MyoD
- Myogenin
- Myoglobin
- Napsin A
- Neurofilament (NF)
- Neuron Specific Anolase (NSE)
- Oct-2
- Oct-3/4
- p16
- Double Stain (p16/Ki-67)
- p53
- p57
- p63
- p120
- p504S (Racemase)
- Parathyroid Hormone (PTH)
- Parvovirus B19
- PAX-2
- PAX5 (BSAP)
- PAX8
- PD-1
- PDL-1
- Perforin
- PLAP
- PMS2
- Pneumocystis carinii
- Podoplanin (D2-40)
- PR
- Prostate Triple Stain (ck903, p63 & Racemase)
- PSA
- PSAP
- PTEN
- RCC
- S100
- SMMHC
- Somatostatin
- Synaptophysin
- TAG-72
- TdT
- Thrombomudulin
- Thyroglobulin
- TIA-1
- Toxoplasma
- TTF-1
- TRAcP
- Tyrosinase
- Uroplakin III
- Villin
- Vimentin
- WT1

FLOW CYTOMETRY

Lymphoid Panel
CD2, CD3, CD4, CD5, CD7, CD8, CD10, CD11c, CD19, CD20, CD23, CD38, CD45, CD56, CD57, sKappa, sLambda

Myeloid Panel
CD11b, CD13, CD14, CD15, CD16, CD22, CD33, CD34, CD64, CD71, CD117, HLA-DR

Acute Leukemia Panel [Reflex]
cMPO, cCD79a, cCD3, cTdT, CD1a, cCD22, CD45

Hairy Cell Leukemia [Reflex]
CD20, CD25, CD45, CD103

ZAP-70 Panel [Reflex]
CD3, CD5, CD19, cZAP-70, CD45

MRD-CLL Panel
CD3, CD5, CD19, CD20, CD22, CD38, CD43, CD45, CD79b, CD81, sLambda, sKappa

Multiple Myeloma Panel
CD3, CD4, CD5, CD7, CD8, CD10, CD19, CD20, CD28, CD34, CD38, CD45, CD56, CD117, CD138, sKappa, sLambda, cKappa, cLambda, cIgM, cIgA, cIgG

Paroxysmal Nocturnal Hemoglobinuria Panel
CD14, CD15, CD24, CD33, CD45, CD59, FLAER

Also Available
CD25, CD30, CD37, CD41, CD49d, CD61, CD235a, FMC7, HLA-ABC, ROR-1, cIGD

TECHNICAL-ONLY TESTING SERVICES

CGI laboratories offer services for technical-only services for Pathology and FISH.