University of Nebraska Medical Center
REGIONAL PATHOLOGY SERVICES

Regional Pathology Services
University of Nebraska Medical Center
981180 Nebraska Medical Center
Omaha, Nebraska 68198-1180
www.reglab.org

Toll Free: 1.800.334.0459
Phone: 402.559.6420
Fax: 402.559.9497

HEMATOLOGY | ONCOLOGY | LYMPHOMA FISH

PROBES

Centromere enumeration
6q21
6q23
15q22
20q12
ABL1 [9q34]
ABL2 [1q25.2]
ALK [2p23]
ATM [11q22.3]
BCL2 [18q21]
BCL6 [3q27]
BCR / ABL1 [t(9;22)] / LSI 9q34
BIRC3 (API2) / MALT1 [t(11;18)]
CBFB [16q22]
CCND1 [11q13]
CCND2 [12p13]
CCND3 [6p21.1]
CDKN2A (P16) [9p21]
CDKN2C [1p32.3] / CKS1B [1q21.3]
CRLF2 [Xp22.33/Yp11.3]
D13S319 [13q14] / 13q34
D7S486 [7q31] / 7 centromere
DEK/NUP214 [t(6;9)]
EGR1 [5q31]
EPOR [19p13.2]
ETV6 (TEL) [12p13]
ETV6 / RUNX1 (TEL / AML1) [t(12;21)]
FGFR1 [8p12]
FIP1L1 / CHIC2 / PDGFRA [4q12]
IGH [14q32 abnormalities]
IGH / BCL2 [t(14;18)]
IGH / CCND1 [t(11;14)]
IGH / FGFR3 [t(4;14)]
IGH / MAF [t(14;16)]
IGH / MAFB [t(14;20)]
IGH / MALT1 [t(14;18)]
IGH / MYC / 8 centromere [t(8;14)]
IGK [2p11.2]
IGL [22q11]
IRF4 / DUSP22 [6p25.3]
JAK2 [9p24]
KAT6A/CREBBP [t(8;16)]
KMT2A (MLL) [11q23]
MALT1 [18q21] / 18 centromere
MECOM (EVI1) [3q26.2]
MLLT10 (AF10) [10p12]
MLLT10 (AF10) / PICALM [t(10;11)]
MYC [8q24]
P2RY8 [Xp22.3/Yp11.3]
PBX1 / TCF3 [t(1;19)]
PDGFRB / CSF1R [5q32]
PML / RARA [t(15;17)]
RARA [17q21]
RUNX1T1 / RUNX1 (ETO / AML1) [t(8;21)]
TCL1A [14q32]
TP53 [17p13.1]
TRA/D (TCR) [14q11.2]
TRB (TCRB) [7q34]

INDICATION-SPECIFIC TESTING and PANELS

- **Acute Lymphocytic Leukemia/Lymphoma (ALL)-Pediatric**
  - ABL1 [9q34]
  - ABL2 [1q25.2]
  - BCR / ABL1 [t(9;22)] / LSI 9q34
  - CRLF2 [Xp22.33/Yp11.3]
  - ETV6 / RUNX1 (TEL/AML1) [t(12;21)]
  - Hyperdiploidy
    - 4 centromere
    - 10 centromere
    - 17 centromere
  - KMT2A (MLL) [11q23]
  - PDGFRB/CSF1R [5q32]

- **Acute Lymphocytic Leukemia/Lymphoma (ALL)-Adult**
  - BCR / ABL1 [t(9;22)] / LSI 9q34
  - CRLF2 [Xp22.33/Yp11.3]
  - KMT2A (MLL) [11q23]

- **Acute Lymphocytic Leukemia/Lymphoma (ALL)-Ph-like**
  - ABL1 [9q34]
  - ABL2 [1q25.2]
  - BCR / ABL1 [t(9;22)] / LSI 9q34
  - CRLF2 [Xp22.33/Yp11.3]
  - EPOR [19p13.2]
  - JAK2 [9p24]
  - PDGFRB/CSF1R [5q32]

- **Acute Lymphocytic Leukemia/Lymphoma (ALL)-T-cell**
  - 6q21 / 6q23
  - BCR / ABL1 [t(9;22)] / LSI 9q34
  - CDKN2A (P16) [9p21]
  - KMT2A (MLL) [11q23]
  - TRA/D (TCR) [14q11.2]
  - TRB (TCRB) [7q34]

- **Chronic Myeloid Leukemia (CML)**
  - BCR / ABL1 [t(9;22)] / LSI 9q34
  - MECOM [3q26.2]*
  - TP53 [17p13.1]* / 8 centromere*

  ** when concurrent Chromosome Analysis is not performed*

- **Eosinophilia**
  - FGFR1 [8p12]
  - FIP1L1 / CHIC2 / PDGFRA [4q12]
  - JAK2 [9p24]
  - PDGFRB [5q32]

- **Acute Myeloid Leukemia (AML)**
  - 8 centromere
  - 20q12
  - CBFB [16q22]
  - D7S486 [7q31] / 7 centromere
  - EGR1 [5q31]
  - KMT2A (MLL) [11q23]
  - MECOM (EVI1) [3q26.2]
  - PML / RARA [t(15;17)]
  - RARA [17q21]
  - RUNX1T1 / RUNX1 (ETO / AML1) [t(8;21)]

- **Myelodysplastic Syndrome (MDS)**
  - 8 centromere
  - 20q12
  - D7S486 [7q31] / 7 centromere
  - EGR1 [5q31]
  - KMT2A (MLL) [11q23]

- **Myeloproliferative Neoplasm (MPN)**
  - 8 centromere
  - 20q12
  - BCR / ABL1 [t(9;22)] / LSI 9q34
  - D7S486 [7q31] / 7 centromere
  - D13S319 [13q14] / 13q34

- **Myelodysplastic Syndrome/ Myeloproliferative Neoplasm (MDS/MPN)**
  - 8 centromere
  - 20q12
  - BCR / ABL1 [t(9;22)] / LSI 9q34
  - D7S486 [7q31] / 7 centromere
  - D13S319 [13q14] / 13q34
  - EGR1 [5q31]
  - KMT2A (MLL) [11q23]

- **Chronic Lymphocytic Leukemia (CLL)**
  - 6q23
  - 12 centromere
  - ATM [11q22.3]
  - D13S319 [13q14] / 13q34
  - IGH [14q32]
  - IGH / CCND1 [t(11;14)]
  - TP53 [17p13.1]

- **Burkitt lymphoma**
  - IGH / MYC / 8 centromere [t(8;14)]
  - MYC [8q24]

- **Follicular Lymphoma**
  - IGH / BCL2 [t(14;18)]

- **Mantle Cell Lymphoma**
  - IGH / CCND1 [t(11;14)]

- **Marginal Zone Lymphoma**
  - 12 centromere
  - BCL6 [3q27] / 3 centromere
  - D7S486 [7q31] / 7 centromere
  - IGH [14q32]
  - MALT1 [18q21] / 18 centromere

- **Non-Hodgkin Lymphoma (NHL)**
  - BCL6 [3q27]*
  - IGH / BCL2 [t(14;18)]
  - IGH / MYC / 8 centromere [t(8;14)]
  - MYC [8q24]
  - TP53 [17p13.1]

  ** alternate & major breakpoint*

- **Multiple Myeloma (MM)**
  - CDKN2C [1p32.3] / CKS1B [1q21.3]
  - D13S319 [13q14] / 13q34
  - Hyperdiploidy
    - 9 centromere
    - 11 centromere
  - IGH [14q32 abnormalities]
    - IGH / CCND1 [t(11;14)]
    - IGH / FGFR3 [t(4;14)]
    - IGH / MAF [t(14;16)]
    - IGH / MAFB [t(14;20)]
  - TP53 [17p13.1]

Please call for updates, as our probe inventory and availability is constantly expanding.