

## FISH Probes List – 2024

Name	Catalog Number	Probe Type	Clinical Relevance	Synonyms	Chromosomal Localization	Sizes	Certifications
ABL1 Break Apart FISH Probe	LCFS-002	Break Apart	Evaluation and prognosis of chronic myeloid leukemia (CML), acute lymphocytic leukemia (ALL) and acute myelogenous leukemia (AML)			5; 10; 20 tests	IVD CE
ABL2 Break Apart FISH Probe	LCFS-004	Break Apart	Evaluation and prognosis of acute non-lymphoblastic leukemia (ALL) and acute myelogenous leukemia (AML)			5; 10; 20 tests	IVD CE
ALK Break Apart FISH Probe	LCFS-009	Break Apart	Assessment of non-small-cell lung carcinoma, renal cell carcinoma, pseudoangiomatous stromal hyperplasia, colorectal carcinoma and anaplastic large cell lymphomas (ALCL)			5; 10; 20 tests	Health Canada, IVD CE
AML1/CSP21 FISH Probe	LCFS-012	Amplification/Deletion	Associated with several types of leukemia	RUNX1, CBFA2, AML1-EVI-1, AMLCR1, EVI-1, PEBP2aB	CSP21	5; 10; 20 tests	IVD CE
API2/CSP11 FISH Probe	LCFS-016	Amplification/Deletion	This gene encodes a member of the API family of proteins that inhibit apoptosis by binding to tumor necrosis factor receptor-associated factors TRAF1 and TRAF2. The encoded protein inhibits apoptosis induced by serum deprivation but does not affect apoptosis resulting from exposure to menadione, a potent inducer of free radicals	BIRC3, AIP1, CIAP2, HAIP1, HIAP1, MALT2, MIHC, RNF49	CSP11	5; 10; 20 tests	IVD CE
AR/CSPX FISH Probe	LCFS-018	Amplification/Deletion	Spinal bulbar muscular atrophy (SBMA, also known as Kennedy's disease), also associated with complete androgen insensitivity (CAIS)	AIS, DHTR, HUMARA, KD, NR3C4, SBMA, SMAX1, TFM	CSPX	5; 10; 20 tests	IVD CE
ATM/CSP11 FISH Probe	LCFS-023	Amplification/Deletion	Ataxia-telangiectasia, an autosomal recessive disorder	AT1, ATA, ATC, ATD, ATE, ATDC, TEL1, TELO1	CSP11	5; 10; 20 tests	IVD CE
BCL2 Break Apart FISH Probe	LCFS-029	Break Apart	The detection of BCL2 gene rearrangement, eventually fusion with other genes, shows poor prognosis and survival rate in follicular lymphoma (FL)			5; 10; 20 tests	IVD CE
BCL6/CSP3 FISH Probe	LCFS-033	Amplification/Deletion	This gene is found to be frequently translocated and hypermutated in diffuse large-cell lymphoma (DLCL), gene may be involved in the pathogenesis of DLCL	BCL5, BCL6A, LAZ3, ZBTB27, ZNF51	CSP3	5; 10; 20 tests	IVD CE

CR/CSP22 FISH Probe	LCFS-039	Amplification/Deletion	Chronic myelogenous leukemia.	ALL, BCR-ABL1, BCR1, CML, D22S11, D22S662, FLJ16453, PHL	CSP22	5; 10; 20 tests	IVD CE
BRAF/CSP7 FISH Probe	LCFS-043	Amplification/Deletion	Cancer-causing mutations in melanoma, non-Hodgkin lymphoma, colorectal cancer, thyroid carcinoma, non-small cell lung carcinoma, hairy cell leukemia and adenocarcinoma of lung	NS7, BRAF1, RAFB1, B-RAF1	CSP7	5; 10; 20 tests	IVD CE
BRAF Break Apart FISH Probe	LCFS-044	Break Apart	Gastric cancer, assessment of RAF/MEK inhibitor therapy			5; 10; 20 tests	IVD CE
CAN/CSP9 FISH Probe	LCFS-050	Amplification/Deletion	Acute myeloid leukemia and myelodysplastic syndrome	NUP214	CSP9	5; 10; 20 tests	IVD CE
CBFB Break Apart FISH Probe	LCFS-053	Break Apart	CBFB gene fragmentation helps the assessment and prognosis of M4 typing in acute myeloid leukemia (AML) patients			5; 10; 20 tests	IVD CE
CCND1/CSP11 FISH Probe	LCFS-056	Amplification/Deletion	Mutations, amplification and overexpression of this gene, which alters cell cycle progression, are observed frequently in a variety of tumors and may contribute to tumorigenesis.	BCL1, PRAD1, U21B31, D11S287E	CSP11	5; 10; 20 tests	IVD CE
CCND1 Break Apart FISH Probe	LCFS-057	Break Apart	CCND1 gene rearrangement can be helpful in assessment of a variety of tumors, where CDK kinases are involved			5; 10; 20 tests	IVD CE
PD-L1/CSP9 FISH Probe	LCFS-060	Amplification/Deletion	Colon cancer and renal cell carcinoma	CD274, B7-H, B7H1, PDL1, PDCD1L1, PDCD1LG1	CSP9	5; 10; 20 tests	IVD CE
CIC Break Apart FISH Probe	LCFS-071	Break Apart	Juvenile sarcomas, undifferentiated sarcoma and other well-differentiated soft tissue sarcomas			5; 10; 20 tests	IVD CE
C-Met/CSP7 FISH Probe	LCFS-073	Amplification/Deletion	Papillary renal cell carcinoma, hepatocellular carcinoma, and various head and neck cancers.	HGFR, AUTS9, RCCP2, MET, DFNB97	CSP7	5; 10; 20 tests	IVD CE
D13S319/CSP13 FISH Probe	LCFS-086	Amplification/Deletion	Multiple myeloma and chronic lymphoblastic leukemia are associated with the deletion of 13q14, which may be located near D13S319		CSP13	5; 10; 20 tests	IVD CE
D7S486/CSP7 FISH Probe	LCFS-087	Amplification/Deletion	D7S486 (FRA7G) is a common aphidicolin-inducible fragile site at 7q31.2, showing loss of heterozygosity in human malignancies	FRA7G	CSP7	5; 10; 20 tests	IVD CE
DDIT3 Break Apart FISH Probe	LCFS-089	Break Apart	Round cell and myxoid liposarcoma			5; 10; 20 tests	IVD CE
E2A/CSP19 FISH Probe	LCFS-095	Amplification/Deletion	Lymphoid malignancies including pre-B-cell acute lymphoblastic leukemia, childhood leukemia and acute leukemia	TCF3, ITF1, MGC129647,	CSP19	5; 10; 20 tests	IVD CE

				MGC129648, bHLHb21			
EGFR/CSP7 FISH Probe	LCFS-100	Amplification/Deletion	Lung cancer	ERBB, HER1, mENA, ERBB1, PIG61, NISBD2	CSP7	5; 10; 20 tests	IVD CE
ERG Break Apart FISH Probe	LCFS-111	Break Apart	Prostate cancer, sarcoma and acute myeloid leukemia			5; 10; 20 tests	IVD CE
ETV1 Break Apart FISH Probe	LCFS-116	Break Apart	Ewing's sarcoma and prostate cancer			5; 10; 20 tests	IVD CE
ETV6 Break Apart FISH Probe	LCFS-121	Break Apart	Hematopoietic system tumors, breast cancer, salivary adenocarcinoma and soft tissue tumors			5; 10; 20 tests	IVD CE
EVI1 Break Apart FISH Probe	LCFS-127	Break Apart	Acute lymphoblastic leukemia and myelodysplastic syndrome			5; 10; 20 tests	IVD CE
EWSR1 Break Apart FISH Probe	LCFS-129	Break Apart	Tumorigenesis of Ewing sarcoma as well as neuroectodermal and various other tumors			5; 10; 20 tests	IVD CE
FGFR1/CSP8 FISH Probe	LCFS-138	Amplification/Deletion	Pfeiffer syndrome, Jackson-Weiss syndrome, Antley-Bixler syndrome, osteoglophonic dysplasia, and autosomal dominant Kallmann syndrome 2. Chromosomal aberrations involving this gene are associated with stem cell myeloproliferative disorder and stem cell lymphoma syndrome	CEK, FLG, HH2, OGD, FLT2, KAL2, BFGFR, CD331, FGFBR, FLT-2, HBGFR, N-SAM, FGFR-1, HRTFDS, bFGF-R-1	CSP8	5; 10; 20 tests	IVD CE
FGFR1 Break Apart FISH Probe	LCFS-139	Break Apart	The fragmentation of the FGFR1 gene is characteristic for the treatment with imatinib, a tyrosine kinase inhibitor, for chronic myeloid leukemia and malignant gastrointestinal stromal tumors			5; 10; 20 tests	IVD CE
FGFR2/CSP10 FISH Probe	LCFS-140	Amplification/Deletion	Crouzon syndrome, Pfeiffer syndrome, craniosynostosis, Apert syndrome, Jackson-Weiss syndrome, Beare-Stevenson cutis gyrata syndrome, Saethre-Chotzen syndrome, and syndromic craniosynostosis	BEK, JWS, BBDS, CEK3, CFD1, ECT1, KGFR, TK14, TK25, BFR- 1, CD332, K-SAM	CSP10	5; 10; 20 tests	IVD CE
FKHR Break Apart FISH Probe	LCFS-149	Break Apart	Helpful in the diagnosis and prognosis of rhabdomyosarcoma			5; 10; 20 tests	IVD CE

FUS Break Apart FISH Probe	LCFS-157	Break Apart	Helpful in diagnosis of myxoid liposarcoma, acute myelogenous leukemia (AML), hemangiomatoid fibrous histiocytoma, fibromyxoid sarcoma and other auxiliary diagnosis			5; 10; 20 tests	IVD CE
HER-2/CSP17 FISH Probe	LCFS-163	Amplification/Deletion	This gene encodes a member of the epidermal growth factor (EGF) receptor family of receptor tyrosine kinases. Amplification and/or overexpression of this gene has been reported in numerous cancers, including breast and ovarian tumors	NEU, NGL, HER2, TKR1, CD340, ERBB2, MLN 19, HER-2, neu	CSP17	5; 10; 20 tests	Health Canada, IVD CE
IGH Break Apart FISH Probe	LCFS-176	Break Apart	Helpful in diagnosis of acute lymphoblastic leukemia, multiple myeloma and lymphoma			5; 10; 20 tests	IVD CE
KRAS/CSP12 FISH Probe	LCFS-193	Amplification/Deletion	Lung adenocarcinoma, mucinous adenoma, ductal carcinoma of the pancreas and colorectal carcinoma	NS, NS3, CFC2, RALD, KRAS1, KRAS2, RASK2, KI-RAS, C-K-RAS, K-RAS2A, K-RAS2B, K-RAS4A, K-RAS4B	CSP12	5; 10; 20 tests	IVD CE
LPL/CSP8 FISH Probe	LCFS-195	Amplification/Deletion	Disorders of lipoprotein metabolism	HDLCQ11, LIPD	CSP8	5; 10; 20 tests	IVD CE
MALT1/CSP18 FISH Probe	LCFS-200	Amplification/Deletion	Mucosa-associated lymphoid tissue (MALT) lymphomas	DKFZp434L132, MLT, MLT1	CSP18	5; 10; 20 tests	IVD CE
MALT1 Break Apart FISH Probe	LCFS-201	Break Apart	Mucosa-Associated Lymphoid Tissue (MALT) lymphomas after HP chemotherapy			5; 10; 20 tests	IVD CE
MDM2/CSP12 FISH Probe	LCFS-205	Amplification/Deletion	Multiple cancers and tumorigenesis	HDMX, hdm2, ACTFS	CSP12	5; 10; 20 tests	Health Canada, IVD CE
KMT2A (MLL) Break Apart FISH Probe	LCFS-213	Break Apart	Detection and prognosis of AML and AML with t (9; 11) (P22; q23)			5; 10; 20 tests	IVD CE
MYB/CSP6 FISH Probe	LCFS-222	Amplification/Deletion	Leukemias and lymphomas (gene is an oncogene)	MYB, EFG	CSP6	5; 10; 20 tests	IVD CE
MYC/CSP8 FISH Probe	LCFS-224	Amplification/Deletion	Burkitt lymphoma and multiple myeloma	MYCN, NMYC, ODED, MODED, bHLHe37	CSP8	5; 10; 20 tests	IVD CE
MYC Break Apart FISH Probe	LCFS-225	Break Apart	Breast cancer, cervical cancer, neuroblastoma, lymphoma, acute lymphocytic leukemia detection and prognosis			5; 10; 20 tests	IVD CE
NTRK1/CSP1 FISH Probe	LCFS-240	Amplification/Deletion	Congenital insensitivity to pain, anhidrosis, self-mutilating behavior, cognitive disability and cancer	MTC, TRK, TRK1, TRKA, Trk-A, p140-TrkA	CSP1	5; 10; 20 tests	IVD CE

p16/CSP9 FISH Probe	LCFS-256	Amplification/Deletion	Multiple tumors, also an important tumor suppressor gene	CDKN2A, ARF, MLM, P14, P19, CMM2, INK4, MTS1, TP16, CDK4I, CDKN2, INK4A, MTS-1, P14ARF, P19ARF, P16INK4, P16INK4A, P16-INK4A	CSP9	5; 10; 20 tests	IVD CE
TP53/CSP17 FISH Probe	LCFS-257	Amplification/Deletion	Variety of cancers, including hereditary cancers such as Li-Fraumeni syndrome	BCC7, LFS1, TRP53	CSP17	5; 10; 20 tests	IVD CE
PBX1/CSP1 FISH Probe	LCFS-266	Amplification/Deletion	Pre-B-cell acute lymphoblastic leukemia	DKFZp686B09108 , MGC126627	CSP1	5; 10; 20 tests	IVD CE
PDGFRA/CSP4 FISH Probe	LCFS-270	Amplification/Deletion	Idiopathic hypereosinophilic syndrome, somatic and familial gastrointestinal stromal tumors	PDGFR2	CSP4	5; 10; 20 tests	IVD CE
PDGFRB/CSP5 FISH Probe	LCFS-271	Amplification/Deletion	Chronic myeloproliferative disorders with eosinophilia	CD140B, JTK12, PDGF-R-beta, PDGFR, PDGFR1	CSP5	5; 10; 20 tests	IVD CE
PIK3CA/CSP3 FISH Probe	LCFS-276	Amplification/Deletion	Cervical cancers	MCM, CWS5, MCAP, PI3K, CLOVE, MCMTC, p110-alpha	CSP3	5; 10; 20 tests	IVD CE
PTEN/CSP10 FISH Probe	LCFS-282	Amplification/Deletion	Tumor suppressor mutated in a large number of cancers	BZS, DEC, CWS1, GLM2, MHAM, TEP1, MMAC1, PTEN1, 10q23del	CSP10	5; 10; 20 tests	IVD CE
RARA Break Apart FISH Probe	LCFS-285	Break Apart	Chondromesenchymal hamartoma			5; 10; 20 tests	IVD CE
RB1/CSP13 FISH Probe	LCFS-286	Amplification/Deletion	Childhood retinoblastoma (RB), bladder cancer and osteogenic sarcoma	RB, pRb, OSRC, pp110, p105-Rb, PPP1R130	CSP13	5; 10; 20 tests	IVD CE

RET/CSP10 FISH Probe	LCFS-287	Amplification/Deletion	Hirschsprung disease and central hypoventilation syndrome; patients with renal agenesis	PTC, MTC1, HSCR1, MEN2A, MEN2B, RET51, CDHF12, CDHR16, RET-ELE1	CSP10	5; 10; 20 tests	IVD CE
RET Break Apart FISH Probe	LCFS-288	Break Apart	Non-small cell lung adenocarcinoma, thyroid papillary carcinoma and fibrosarcoma			5; 10; 20 tests	IVD CE
ROS1 Break Apart FISH Probe	LCFS-292	Break Apart	Breast, lung, bladder, prostate, retinal cell cancers and other tumors			5; 10; 20 tests	IVD CE
SS18 Break Apart FISH Probe	LCFS-306	Break Apart	Diagnosis of sarcomas			5; 10; 20 tests	IVD CE
TERC/CSP3 FISH Probe	LCFS-312	Amplification/Deletion	Precancerous lesions (CIN or ASCUS, LSIL / HSIL) of developing cervical cancer		CSP3	5; 10; 20 tests	IVD CE
TOP2A/CSP17 FISH Probe	LCFS-326	Amplification/Deletion	Breast cancers diagnosis, prognosis (together with HER-2) and treatment		CSP17	5; 10; 20 tests	IVD CE
WT1/CSP11 FISH Probe	LCFS-339	Amplification/Deletion	Wilms tumor	GUD, AWT1, WAGR, WT33, NPHS4, WIT-2, EWS-WT1	CSP11	5; 10; 20 tests	IVD CE
ZNF217/CSP20 FISH Probe	LCFS-344	Amplification/Deletion	Ovarian cystadenocarcinoma and ovarian serous cystadenocarcinoma	ZABC1	CSP20	5; 10; 20 tests	IVD CE
TRA, TRD Break Apart FISH Probe	LCFS-372	Break Apart	T-lymphocytic leukemia			5; 10; 20 tests	IVD CE
D5S23,D5S721/CSP15 FISH Probe	LCFS-374	Amplification/Deletion	AML and MDS (together with the EGR1 FISH gene probe)		CSP15	5; 10; 20 tests	IVD CE
D7S522/CSP7 FISH Probe	LCFS-375	Amplification/Deletion	Head and neck squamous cell carcinoma, prostate cancer, kidney cancer, ovarian adenocarcinoma, rectal cancer and breast cancer		CSP 7	5; 10; 20 tests	IVD CE
MALT1/IGH Dual Fusion FISH Probe	LCFS-396	Dual, Fusion	Mucosa-Associated Lymphoid Tissue (MALT) lymphomas, B-cell lymphomas and other malignancies			5; 10; 20 tests	IVD CE

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**- Not all the products are available in all countries, please ask your local distributor.**