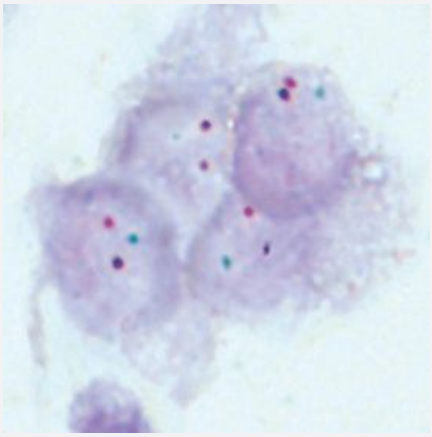
FUS Split CISH Probe

Catalog # CS0010 Size 100 uL

Applications



Chromogenic *In Situ* Hybridization (FFPE Tissue)

Myxoid liposarcoma tissue section with translocation affecting the 16p11.2 locus as indicated by one non-rearranged red/green fusion signal, one red signal, and one separate green signal indicating the translocation.

Specification

Product Description	FUS Split CISH Probe is designed for the qualitative detection of translocations involving the human FUS gene at 16p11.2 in formalin-fixed, paraffin-embedded specimens by chromogenic *in situ* hybrid ization (CISH).
Reactivity	Human
Recommend Usage	The product is ready-to-use. No reconstitution, mixing, or dilution is required. Bring probe to room te mperature (18-25°C) and mix briefly before use.
Supplied Product	Reagent Provided: This Probe is composed of: 1. Digoxigenin-labeled polynucleotides, which target sequences mapping in 16p11.2* (chr16:30,663, 949-30,840,569) distal to the FUS breakpoint region. 2. Dinitrophenyl-labeled polynucleotides, which target sequences mapping in 16p11.2* (chr16:31,21 3,259-31,927,155) proximal to the FUS breakpoint region. 3. Formamide based hybridization buffer. *according to Human Genome Assembly GRCh37/hg19

Probe Position	
Regulatory Status	For research use only (RUO)
Storage Instruction	Store at 2-8°C in an upright position. Return to storage conditions immediately after use.
Note	The probe is intended to be used in combination with the CISH Implementation Kit 2 (Catalog #: KA5366), which provides necessary reagents for specimen pretreatment and post-hybridization processing. Interpretation of results: Using the CISH Implementation Kit 2 (Cat # KA5366), hybridization signals of Digoxigenin-labeled polynucleotides appear as dark green colored distinct dots (distal to the FUS breakpoint region), and Dinitrophenyl-labeled polynucleotides appear as bright red colored distinct dots (proximal to the FUS breakpoint region). **Normal situation**: In interphases of normal cells or cells without a translocation involving the FUS gene region, two red/green fusion signals appear. **Aberrant situation**: One FUS gene region affected by a translocation is indicated by one separate distinct dot-shaped green signal and one separate distinct dot-shaped red signal. Overlapping signals may appear as brown signals. Genomic aberrations due to small deletions, duplications or inversions might result in inconspicuous signal patterns. Other signal patterns than those described above may be observed in some abnormal samples. These unexpected signal patterns should be further investigated.
Interpretation of Result	

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Gene Info — FUS

Entrez GeneID	2521
Gene Name	FUS
Gene Alias	CHOP, FUS-CHOP, FUS1, TLS, TLS/CHOP, hnRNP-P2
Gene Description	fusion (involved in t(12;16) in malignant liposarcoma)
Omim ID	137070
Gene Ontology	Hyperlink

Gene Summary	This gene encodes a multifunctional protein component of the heterogeneous nuclear ribonucleop rotein (hnRNP) complex. The hnRNP complex is involved in pre-mRNA splicing and the export of f ully processed mRNA to the cytoplasm. This protein belongs to the FET family of RNA-binding pro teins which have been implicated in cellular processes that include regulation of gene expression, maintenance of genomic integrity and mRNA/microRNA processing. Alternative splicing results in multiple transcript variants. Defects in this gene result in amyotrophic lateral sclerosis type 6. [prov ided by RefSeq
Other Designations	FUS-CHOP fusion protein|FUS-CHOP protein fusion|Fusion gene in myxoid liposarcoma|fus-like protein|fus/tls-chop oncogene|heterogeneous nuclear ribonucleoprotein P2|translocated in liposar coma

Disease

- Amyotrophic Lateral Sclerosis
- Azoospermia
- Cognition Disorders
- Diabetes Mellitus
- Frontotemporal Dementia
- Frontotemporal Lobar Degeneration
- Genetic Predisposition to Disease
- Infertility
- Neoplasms
- Neuropsychological Tests
- Obesity
- Oligospermia
- Overweight
- Parkinsonian Disorders
- Prostate cancer