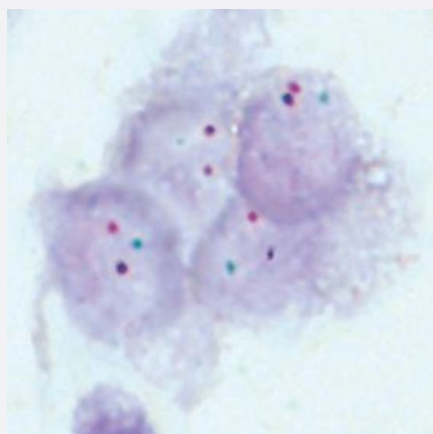


FUS Split CISH Probe

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* hybridization (CISH).

Reactivity

Human

Recommend Usage

The product is ready-to-use. No reconstitution, mixing, or dilution is required. Bring probe to room temperature (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* (chr16:31,213,259-31,927,155) 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

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.

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 ribonucleoprotein (hnRNP) complex. The hnRNP complex is involved in pre-mRNA splicing and the export of fully processed mRNA to the cytoplasm. This protein belongs to the FET family of RNA-binding proteins 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. [provided 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 liposarcoma

Disease

- [Amyotrophic Lateral Sclerosis](#)
- [Azoospermia](#)
- [Cognition Disorders](#)
- [Diabetes Mellitus](#)
- [Frontotemporal Dementia](#)
- [Frontotemporal Lobar Degeneration](#)
- [Genetic Predisposition to Disease](#)
- [Infertility](#)
- [Neoplasms](#)
- [Neuropsychological Tests](#)
- [Obesity](#)
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- [Parkinsonian Disorders](#)
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