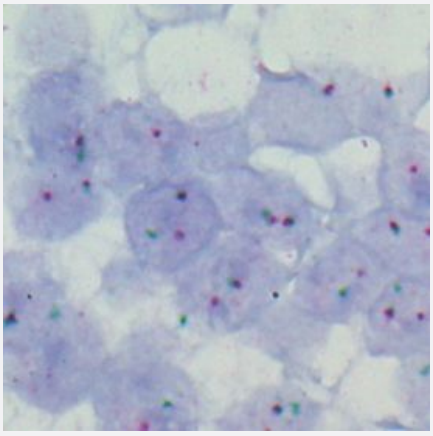
EWSR1 Split CISH Probe

Catalog # CS0008 Size 100 uL

Applications



Chromogenic *In Situ* Hybridization (FFPE Tissue)

Ewing sarcoma tissue section with translocation affecting the 22q12.1-q12.2 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	EWSR1 Split CISH Probe is designed for the qualitative detection of translocations involving the human EWSR1 gene at 22q12.2 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 22q12.2* (chr22:29,779,841-30,057,928) distal to the EWSR1 breakpoint region. 2. Dinitrophenyl-labeled polynucleotides, which target sequences mapping in 22q12.1-22q12.2* (chr22:29,413,831-29,673,440) proximal to the EWSR1 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 EWSR1 breakpoint region), and Dinitrophenyl-labeled polynucleotides appear as bright red colored distinct dots (proximal to the EWSR1 breakpoint region). **Normal situation**: In interphases of normal cells or cells without a translocation involving the EWSR1 gene region, two red/green fusion signals appear. **Aberrant situation**: One EWSR1 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 — EWSR1

Entrez GeneID	2130
Gene Name	EWSR1
Gene Alias	EWS
Gene Description	Ewing sarcoma breakpoint region 1
Omim ID	133450
Gene Ontology	Hyperlink

Gene Summary	This gene encodes a multifunctional protein that is involved in various cellular processes, includin g gene expression, cell signaling, and RNA processing and transport. The protein includes an N-t erminal transcriptional activation domain and a C-terminal RNA-binding domain. Chromosomal tr anslocations between this gene and various genes encoding transcription factors result in the pro duction of chimeric proteins that are involved in tumorigenesis. These chimeric proteins usually co nsist of the N-terminal transcriptional activation domain of this protein fused to the C-terminal DN A-binding domain of the transcription factor protein. Mutations in this gene, specifically a t(11;22)(q24;q12) translocation, are known to cause Ewing sarcoma as well as neuroectodermal and vario us other tumors. Alternative splicing of this gene results in multiple transcript variants. Related pse udogenes have been identified on chromosomes 1 and 14. [provided by RefSeq
Other Designations	Ewings sarcoma EWS-Fli1 (type 1) oncogene|bK984G1.4 (Ewing sarcoma breakpoint region 1 p rotein)