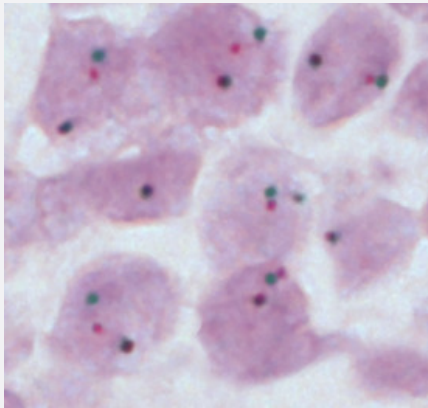


ALK Split CISH Probe

Catalog # CS0001 Size 400 uL

Applications



Chromogenic *In Situ* Hybridization (FFPE Tissue)

Lung carcinoma tissue section with translocation affecting the 2p23.2 locus as indicated by one red/green fusion (non-rearranged) signal, one red signal, and one separate green signal.

Specification

Product Description	ALK Split CISH Probe is designed for the qualitative detection of translocations involving the human ALK gene at 2p23.2 in formalin-fixed, paraffin-embedded specimens by chromogenic <i>in situ</i> 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	<p>Reagent Provided:</p> <p>This Probe is composed of:</p> <ol style="list-style-type: none"> 1. Digoxigenin-labeled polynucleotides, which target sequences mapping in 2p23.2* (chr2:29,460,144-29,681,581) proximal to the ALK breakpoint region. 2. Dinitrophenyl-labeled polynucleotides, which target sequences mapping in 2p23.2* (chr2:29,174,204-29,383,335) distal to the ALK breakpoint region. 3. Formamide based hybridization buffer. <p>*according to Human Genome Assembly GRCh37/hg19</p>

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	<p>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.</p> <p>Interpretation of results: Using the CISH Implementation Kit 2 (Cat # KA5366), hybridization signals of Digoxigenin-labeled polynucleotides appear as dark green colored distinct dots (proximal to the ALK breakpoint region), and Dinitrophenyl-labeled polynucleotides appear as bright red colored distinct dots (distal to the ALK breakpoint region).</p> <p>Normal situation: In interphases of normal cells or cells without a translocation involving the ALK gene region, two red/green fusion signals appear.</p> <p>Aberrant situation: One ALK gene region affected by a translocation is indicated by one separate green signal and one separate red signal. EML4-ALK inversion with deletion of 5'-ALK sequences is indicated by one or multiple isolated red signals.</p> <p>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.</p>

Interpretation of Result

Applications

- Chromogenic *In Situ* Hybridization (FFPE Tissue)

Lung carcinoma tissue section with translocation affecting the 2p23.2 locus as indicated by one red/green fusion (non-rearranged) signal, one red signal, and one separate green signal.

Gene Info — ALK

Entrez GeneID	238
Gene Name	ALK
Gene Alias	CD246, Ki-1, TFG/ALK
Gene Description	anaplastic lymphoma receptor tyrosine kinase
Omim ID	105590
Gene Ontology	Hyperlink

Gene Summary

The 2;5 chromosomal translocation is frequently associated with anaplastic large cell lymphomas (ALCLs). The translocation creates a fusion gene consisting of the ALK (anaplastic lymphoma kinase) gene and the nucleophosmin (NPM) gene: the 3' half of ALK, derived from chromosome 2, is fused to the 5' portion of NPM from chromosome 5. A recent study shows that the product of the NPM-ALK fusion gene is oncogenic. The deduced amino acid sequences reveal that ALK is a novel receptor protein-tyrosine kinase having a putative transmembrane domain and an extracellular domain. These sequences are absent in the product of the transforming NPM-ALK gene. ALK shows the greatest sequence similarity to LTK (leukocyte tyrosine kinase). ALK plays an important role in the development of the brain and exerts its effects on specific neurons in the nervous system. [provided by RefSeq]

Other Designations

ALK tyrosine kinase receptor|CD246 antigen|anaplastic lymphoma kinase (Ki-1)|anaplastic lymphoma kinase Ki-1

Disease

- [Adenocarcinoma](#)
- [Carcinoma](#)
- [Genetic Predisposition to Disease](#)
- [Kidney Failure](#)
- [Lung Neoplasms](#)
- [Multiple Sclerosis](#)
- [Schizophrenia](#)
- [Tobacco Use Disorder](#)