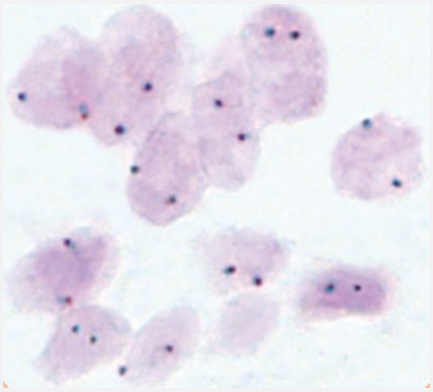
RET Split CISH Probe

Catalog # CS0013 Size 400 uL

Applications



Chromogenic *In Situ* Hybridization (Cells)

Normal interphase cells as indicated by two red/green fusion signals per nucleus.

Specification

Product Description	RET Split CISH Probe is designed for the qualitative detection of human RET gene at 10q11.21 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: 1. Digoxigenin-labeled polynucleotides targeting sequences mapping in 10q11.21* (chr10:43,687,278-43,856,587) distal to the RET breakpoint region 2. Dinitrophenyl-labeled polynucleotides targeting sequences mapping in 10q11.21* (chr10:43,340,888-43,510,171) proximal to the RET 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. Hybridization signals of digoxigenin-labeled polynucleotides appear dark green colored distinct dots haped (distal to the RET breakpoint region), and dinitrophenyl-labeled polynucleotides appear bright red distinct dot-shaped (proximal to the RET breakpoint region)). Normal situation: In interphases of normal cells or cells without a translocation involving the RET gene region, two red/green fusion signals appear. Aberrant situation: One RET gene region affected by a translocation is indicated by one separate green signal and one separate red signal. Isolated green signals are the result of deletions proximal to the RET breakpoint region. Other signal distribution may be observed in some abnormal samples which might result in a different signal pattern than described above, indicating variant rearrangements. Unexpected signal patterns should be further investigated.
Interpretation of Result	

Applications

- Chromogenic *In Situ* Hybridization (Cells)

  Normal interphase cells as indicated by two red/green fusion signals per nucleus.

Gene Info — RET

Entrez GeneID	5979
Gene Name	RET
Gene Alias	CDHF12, HSCR1, MEN2A, MEN2B, MTC1, PTC, RET-ELE1, RET51
Gene Description	ret proto-oncogene
Omim ID	142623 155240 162300 164761 171300 171400 209880
Gene Ontology	Hyperlink
Gene Summary	This gene, a member of the cadherin superfamily, encodes one of the receptor tyrosine kinases, which are cell-surface molecules that transduce signals for cell growth and differentiation. This gene plays a crucial role in neural crest development, and it can undergo oncogenic activation in vivo and in vitro by cytogenetic rearrangement. Mutations in this gene are associated with the disorders multiple endocrine neoplasia, type IIA, multiple endocrine neoplasia, type IIB, Hirschsprung disease, and medullary thyroid carcinoma. Two transcript variants encoding different isoforms have been found for this gene. Additional transcript variants have been described but their biological validity has not been confirmed. [provided by RefSeq

Other Designations	RET transforming sequence|cadherin family member 12|hydroxyaryl-protein kinase|oncogene RET|receptor tyrosine kinase|ret proto-oncogene (multiple endocrine neoplasia and medullary thyroid carcinoma 1, Hirschsprung disease)

Pathway

- Endocytosis
- Pathways in cancer
- Thyroid cancer

Disease

- Adenocarcinoma
- Adenoma
- Adrenal Gland Neoplasms
- Alzheimer Disease
- Atherosclerosis
- Carcinoma
- Cleft Lip
- Cleft Palate
- Digestive System Abnormalities
- Disease Progression
- Down Syndrome
- Endocrine Gland Neoplasms
- Esophageal Neoplasms
- Genetic Predisposition to Disease
- Glomus Tumor
- Hashimoto Disease

- Head and Neck Neoplasms
- Hippel-Lindau Disease
- Hirschsprung Disease
- Hydronephrosis
- Hyperplasia
- Hypertension
- Intestinal Diseases
- Kidney Diseases
- Lung Neoplasms
- Lymphatic Metastasis
- Macular Degeneration
- Multiple endocrine neoplasia
- Multiple Endocrine Neoplasia Type 2a
- Multiple Endocrine Neoplasia Type 2b
- Necrosis
- Neoplasm Metastasis
- Neoplasm Recurrence
- Neoplasms
- Neurofibromatosis
- Nondisjunction
- Pancreatic cancer
- Pancreatic Neoplasms
- Paraganglioma
- Parkinson disease
- Pheochromocytoma
- Prostate cancer

- Prostatic Neoplasms
- Pulmonary Disease
- Recurrence
- Schizophrenia
- Sleep Apnea
- Sudden Infant Death
- Syndrome
- Taste
- Thyroid Diseases
- Thyroid Neoplasms
- Tobacco Use Disorder
- Urea Cycle Disorders
- Urinary Bladder Neoplasms
- Urogenital Abnormalities
- Vesico-Ureteral Reflux
- Vitamin A Deficiency
- von Hippel-Lindau Disease
- Von Hippel-Lindau syndrome
- Werner syndrome