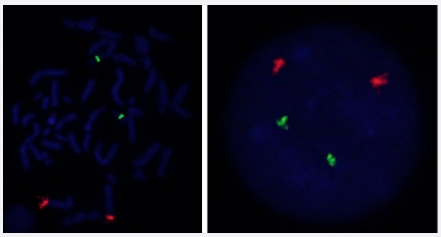
NPM1/RARA DY Translocation FISH Probe

Catalog # FT0016 Size 200 uL, 100 uL

Applications



Hybridization position of the probes on the chromosome:

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Specification

Product Description	Labeled FISH probes for identification of gene transloaction using Fluorescent In Situ Hybridization T echnique. (Technology).
Probe 1	**Name:** RARA **Size:** Approximately 1,200kb **Fluorophore:** FITC **Location:**
Probe 2	**Name:** NPM1 **Size:** Approximately 1,010kb **Fluorophore:** Texas Red **Location:**
Origin	Human

Source	Genomic DNA
Reactivity	Human
Form	Liquid
Notice	We **strongly recommend** the customer to use FFPE FISH PreTreatment Kit 1 (Catalog #: KA2375 or KA2691) for the pretreatment of Formalin-Fixed Paraffin-Embedded (FFPE) tissue sections.
Regulation Status	For research use only (RUO)
Quality Control Testing	Representative images of normal human cell (lymphocyte) stain with the dual color FISH probe. The l eft image is chromosomes at metaphase, and the right image is an interphase nucleus.
Supplied Product	DAPI Counterstain (1500 ng/mL) 125 uL for each 100 uL FISH Probe
Storage Instruction	Store at 4°C in the dark.
Note	Hybridization position of the probes on the chromosome: Hybridization position of the probes on the chromosome:

Applications

- Fluorescent In Situ Hybridization (Cell)

  Protocol Download

Gene Info — NPM1

Entrez GeneID	4869
Gene Name	NPM1
Gene Alias	B23, MGC104254, NPM
Gene Description	nucleophosmin (nucleolar phosphoprotein B23, numatrin)
Omim ID	164040 601626
Gene Ontology	Hyperlink
Gene Summary	NPM1 is a ubiquitously expressed nucleolar protein that shuttles between the nucleus and cytopla sm. It is implicated in multiple functions, including ribosomal protein assembly and transport, contr ol of centrosome duplication, and regulation of the tumor suppressor ARF (MIM 600160). NPM1 mutations that relocalize NPM1 from the nucleus into the cytoplasm are associated with developm ent of acute myeloid leukemia (AML; MIM 601626) (Garzon et al., 2008 [PubMed 18308931]).[su pplied by OMIM

Other Designations	nucleolar phosphoprotein B23|nucleophosmin 1|nucleophosmin/nucleoplasmin family, member 1| numatrin

Gene Info — RARA

Entrez GeneID	5914
Gene Name	RARA
Gene Alias	NR1B1, RAR
Gene Description	retinoic acid receptor, alpha
Omim ID	180240
Gene Ontology	Hyperlink
Gene Summary	Retinoid signaling is transduced by 2 families of nuclear receptors, retinoic acid receptor (RAR) a nd retinoid X receptor (RXR; see MIM 180245), which form RXR/RAR heterodimers. In the absen ce of ligand, DNA-bound RXR/RARA represses transcription by recruiting the corepressors NCO R1 (MIM 600849), SMRT (NCOR2; MIM 600848), and histone deacetylase (see MIM 601241). W hen ligand binds to the complex, it induces a conformational change allowing the recruitment of co activators, histone acetyltransferases (see MIM 603053), and the basic transcription machinery. T ranslocations that always involve rearrangement of the RARA gene are a cardinal feature of acute promyelocytic leukemia (APL; MIM 612376). The most frequent translocation is t(15,17)(q21;q22) , which fuses the RARA gene with the PML gene (MIM 102578) (Vitoux et al., 2007 [PubMed 174 68032]).[supplied by OMIM
Other Designations	OTTHUMP00000164454|OTTHUMP00000164456|Retinoic acid receptor, alpha polypeptide|nucl eophosmin-retinoic acid receptor alpha fusion protein NPM-RAR long form

Pathway

- Acute myeloid leukemia
- Pathways in cancer

Disease

- Acute Disease
- Alcoholism
- Alzheimer disease

- Attention Deficit Disorder with Hyperactivity
- Autistic Disorder
- Bipolar Disorder
- Blast Crisis
- Cardiovascular Diseases
- Cell Transformation
- Chromosome Aberrations
- Cleft Lip
- Cleft Palate
- Diabetes Complications
- Diabetes Mellitus
- Disease Models
- Disease Progression
- Drug Toxicity
- Edema
- Genetic Predisposition to Disease
- Genetic Predisposition to Disease
- Hypercholesterolemia
- Inversion
- Leukemia
- Liver Cirrhosis
- Mental Disorders
- Metabolic Syndrome X
- Myelodysplastic Syndromes
- Myopia
- Neoplasm

- Neoplasms
- Osteoporosis
- Recurrence
- Schizophrenia
- Translocation