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Product Data Sheet
8p12 (FGFR1) FISH Probe

Catalog#: F-FGFR1-(G,R,A,Y,D)

Gene Information:

FGFR1 is a receptor tyrosine kinase. FGFR1 activation initiates multiple signal transduction pathways and drives cellular transformation.

Clinical Relevance:

EGFR Tyrosine Kinase Inhibitors demonstrate good efficacy in the treatment of lung and other cancers. However, almost all individuals eventually develop resistance. Amplification of FGFR1 and activation of downstream pathways is one mechanism of resistance to EGFR inhibitors. FGFR1 aberrations are found in ~7% of cancers, with the majority being gene amplification.

Probe Specifications:

Probe and target gene boundaries are indicated in relation to proximity to the centromere or telomere. Positions are based on UCSC genome assembly GRCh37/hg19.

Locus	Target			Probe		
	Gene	Centromere	Telomere	Centromere	Telomere	Size (Kb)
8p12	FGFR1	38,268,656	38,325,363	38,105,330	38,569,930	465

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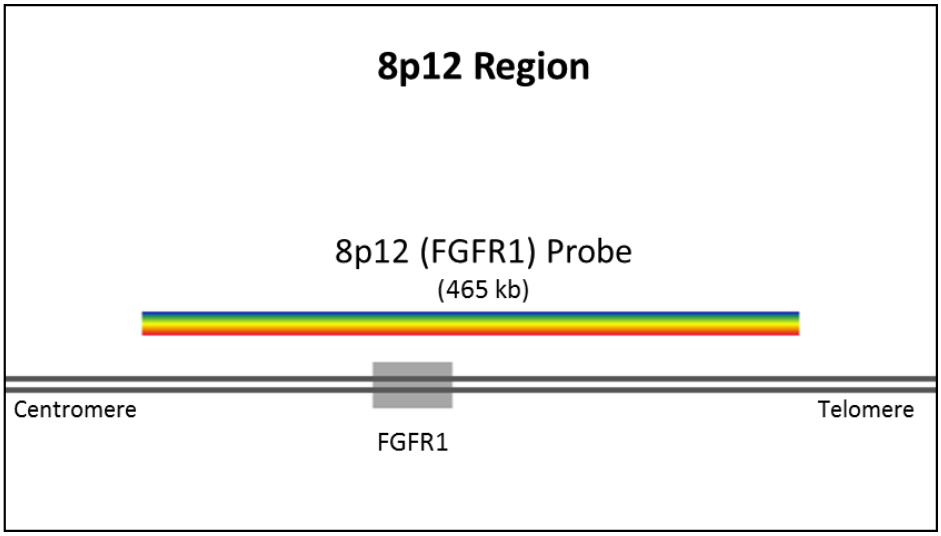
Probe Map:



Product Contents:

All individual or FISH probe cocktails are provided ready to use in hybridization buffer and can be blended with up to 4 total probes. Blocking DNA is included to suppress non-specific binding to similar sequences outside of the indicated binding sites. Researchers are advised to optimize slide processing and hybridization conditions.

Volume: 250µl
Reactions: 50 (5µl/ reaction)

Product Options:

All FISH probes are available in 5 standard color options (Red, Gold, Yellow, Green, and Aqua). Alternative custom color options are available.

Color	Dye	Absorbance	Emission	Ordering Code Extension
Red	Alexa594	590	615	R
Gold	Alexa555	555	565	D
Yellow	Alexa532	532	554	Y
Green	Alexa488	495	519	G
Aqua	DEAC	432	472	A

Storage:

Store at -20°C
Protect from direct light.

References:

1. Azuma K, Kawahara A, Sonoda K, Nakashima K, Tashiro K, Watari K, Izumi H, Kage M, Kuwano M, Ono M, Hoshino T. FGFR1 activation is an escape mechanism in human lung cancer cells resistant to afatinib, a pan-EGFR family kinase inhibitor. Oncotarget. 2014 Aug 15;5(15):5908-19. PubMed PMID: 25115383; PubMed Central PMCID: PMC4171601.

2. Helsten T, Elkin S, Arthur E, Tomson BN, Carter J, Kurzrock R. The FGFR Landscape in Cancer: Analysis of 4,853 Tumors by Next-Generation Sequencing. Clin Cancer Res. 2016 Jan 1;22(1):259-67. doi: 10.1158/1078-0432.CCR-14-3212. Epub 2015 Sep 15. PubMed PMID: 26373574.