

Product Data Sheet

6q22 (ROS-BA) FISH Probe

Catalog #'s: F-ROS-Proximal (Red), F-ROS-Distal (Green)

Gene Information:

ROS1 is a receptor tyrosine kinase and a close paralog to ALK. Ros1 is a proto-oncogene that can be activated by cytogenetic rearrangement with various partners.

Clinical Relevance:

General: ROS1 translocations lead to the fusion of the ROS1 tyrosine kinase domain with 1 of 12 different partner proteins resulting in ROS1 fusion kinases that are constitutively activated and drive cellular transformation. ROS1 translocations are observed in many cancers. Crizotinib is a tyrosine kinase inhibitor of ALK, ROS1, and MET.

Non-small Cell Lung Cancer (NSCL): ROS1 rearrangements occur in approximately 1% of patients with NSCLC. Clinical trials for the treatment of NSCL with Crizotinib are being conducted.

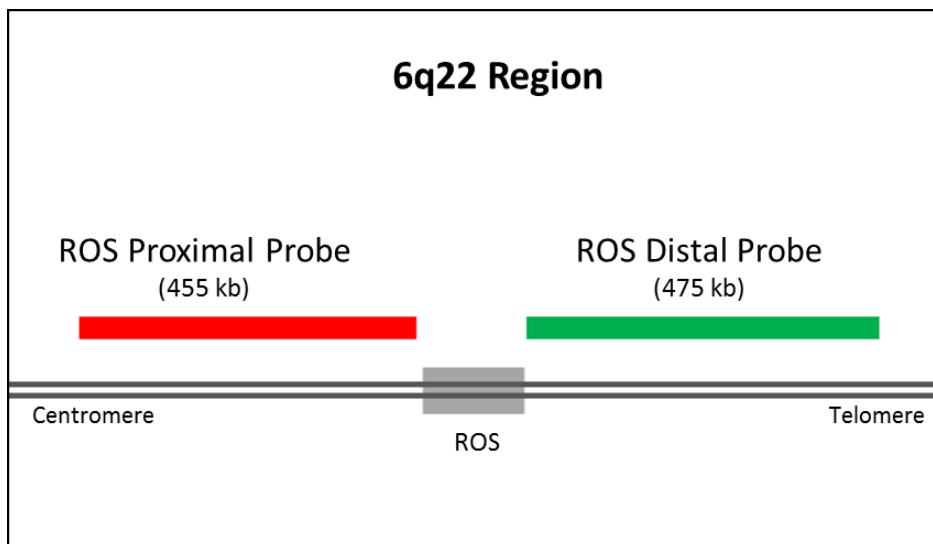
Probe Specifications:

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	Probe	Centromere	Telomere	Size (Kb)
6q22	ROS	117,609,530	117,747,018	ROS Dist	117,750,856	118,225,859	475
				ROS Prox	117,145,887	117,600,855	455

For Investigational Use Only. The performance characteristics of this product have not been established.

Probe Specifications:



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 Colors:

The ROS-BA probes are designed to yield a yellow color when the ROS1 gene is not split, and individual red or green signals when split.

Probe	Color	Dye	Absorbance	Emission
ROS-Proximal	Red	Alexa594	590	615
ROS-Distal	Green	Alexa488	495	519

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Storage:

Store at -20°C
Protect from direct light.

References:

1. Davies KD, Doebele RC. Molecular pathways: ROS1 fusion proteins in cancer. *Clin Cancer Res*. 2013 Aug 1;19(15):4040-5. doi: 10.1158/1078-0432.CCR-12-2851. Epub 2013 May 29. Review. PubMed PMID: 23719267; PubMed Central PMCID:PMC3732549.
2. Shaw AT, Solomon BJ. Crizotinib in ROS1-rearranged non-small-cell lung cancer. *N Engl J Med*. 2015 Feb 12;372(7):683-4. doi: 10.1056/NEJMc1415359. PubMed PMID: 25671264.