

# ROS1 Gene Break-Apart Rearrangement Detection Probe

**Our Profile:** Wuhan HealthCare Biotechnology Co., Ltd. (HealthCare) offers a wide range tools in Molecular Diagnostics for medical and research laboratories. HealthCare innovative products consist of FISH probes (Fast Probe®), Pharmacogenetics Testing and FISH Pretreatment Instrument and are mainly used in areas such as Oncology, Cardio-Cerebrovascular, Hematology, Pre-postnatal Screening and Other major diseases.

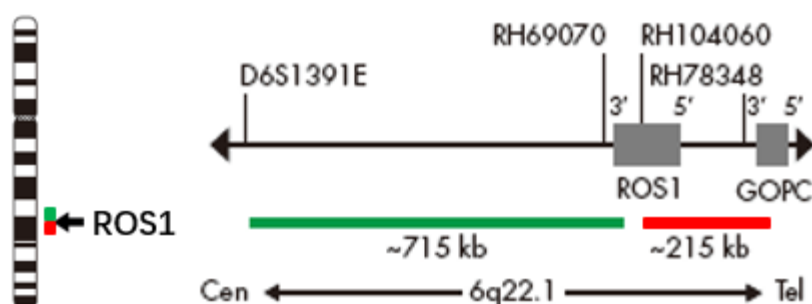
## Product Advantages:

- **Fleetness:** Tissue probe hybridization time: 2 hours. Cell probe hybridization time: 1 hour.
- **Accuracy:** Less non-specific background staining (dyeing). Increase difficult samples detection rate.
- **Reproducibility:** Different laboratories test results are highly reproducible.

## About ROS1

The c-ros sarcoma tumor receptor-tyrosine kinase (ROS proto-oncogene 1, receptor tyrosine kinase, ROS1) is located on chromosome 6q21 and encodes a type of portable tyrosine kinase (RTK), which is involved in the growth, proliferation, differentiation and survival of cells. When the rearrangement of ROS1 gene occurs, the extracellular region is lost and the transmembrane and intracellular tyrosine kinase regions are retained. The rearrangement sites mainly occur in the 32~36 exons of the ROS1 gene. In NSCLC, ROS1 gene mainly fuses with SLC34A2, CD74, EZR, SDC4, etc., and continues to activate ROS1 tyrosine kinase region and downstream signaling pathways, thereby causing the occurrence and development of tumors.

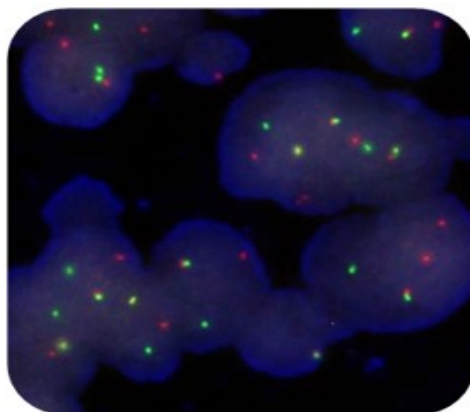
## Probe Description



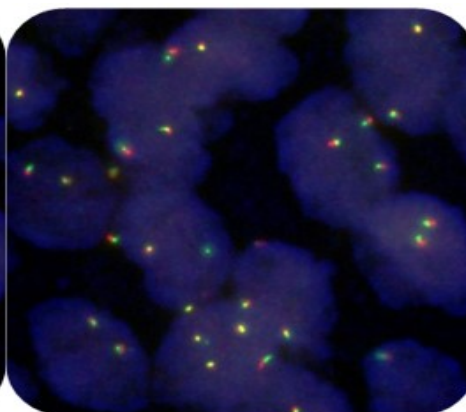
ROS1 gene break-apart rearrangement probe uses orange-red dye to mark the ROS1 gene 5' end region and green dye to mark ROS1 gene 3' end region. The ROS1 gene break-apart rearrangement can detect all ROS1 gene rearrangements, avoiding the missed diagnosis caused by a single fusion gene.

## Detection Significance

ROS1 gene break-apart rearrangement occurs mostly in young, non-smoking lung adenocarcinoma patients. ROS1 rearrangements are different from other mutations such as EGFR, KRAS and ALK. The positive rate of ROS1 rearrangement is about 1.5%, and ROS1 rearrangement positive adenocarcinoma is poorly differentiated. ROS1 break-apart rearrangement positive patients are sensitive to XALKORI (Crizotinib) drugs.




Positive ROS1 gene break-apart rearrangement



Negative ROS1 gene break-apart rearrangement

#### Size Specifications

Product Name	Mark	Size
ROS1 gene break apart rearrangement Detection Kit (IVD)	 / 	10 Tests/Box (100μl)
ROS1 gene break apart rearrangement Detection Kit (IVD)	 / 	20 Tests/Box (200μl)

#### Applications

Solid tumors

#### Product Description

Lung cancer

#### References

- Rimkunas VM, et al. (2012) Clin Cancer Res 18: 4449-57.
- Suehara Y, et al. (2012) Clin Cancer Res 18: 6599-608.
- Takeuchi K, et al. (2012) Nat Med 18: 378-81.

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