FOXO1 Break Apart FISH Probe
Ref: MAD-015M (10 test)

INTRODUCTION:

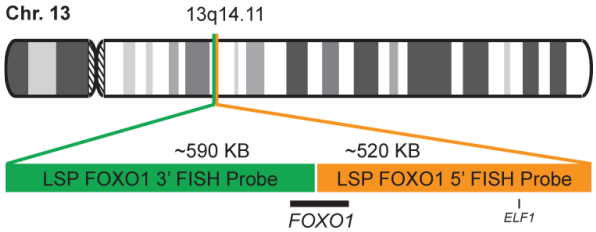
Rearrangements and abnormal expression of the FOXO1 gene (also known as FKH1, FKHR or FOXO1A) have been observed in the alveolar rhabdomyosarcoma, prostate carcinoma and other types of tumors.

In the case of alveolar rhabdomyosarcoma, fragments of the 3' region of the FOXO1 gene translocate with fragments of the 5' portions of the PAX3 and PAX7 genes, located in the chromosome 2 and 1 respectively. Those cases showing the PAX3-FOXO1 fusion in metastases present a worse prognosis, while in primary tumors, the development of the disease is independent of the type of translocation.

In the prostate cancer, deletions of the FOXO1 gene have been detected in up to 30% of the cases.

INTENDED USE:

The FOXO1 Break Apart FISH probe is designed to detect rearrangements in the FOXO1 human gene located in the band of the chromosome 13q14.11. Aside from detecting breaks that can lead to translocation of parts of the gene, to its inversion or to its fusion with other genes, the probe can also be used to identify other aberrations of the FOXO1 gene such as deletions or amplifications.



PROBE DESCRIPTION:

The 5' telomeric fragment of the FOXO1 Break Apart FISH probe labeled with the fluorochrome CytoOrange covers the center and the 5' portion (beginning) of the FOXO1 gene and some adjacent genomic sequences. The 3' centromeric fragment of the FOXO1 Break apart FISH probe labeled with CytoGreen covers the 3' part (end) of the FOXO1 gene as well as the adjacent and inferior sequences of the gene. Both probes are flanking sequences of the FOXO1 gene, in which variable cut-off points have been observed.

	Fluorochrome	Excitation	Emission
3' Fragment	CytoGreen	495 nm	518 nm
5' Fragment	CytoOrange	551 nm	575 nm

REFERENCE AND PRESENTATION:

MAD-015M – **FOXO1 Break Apart FISH** - 10 tests in ready-to-use format.

WORKING PROTOCOL:

The probe is validated for manual in situ hybridization on paraffin-embedded tissue sections following the instructions recommended in the FISH Pretreatment Kit (ref: MAD-FISH-PTK).

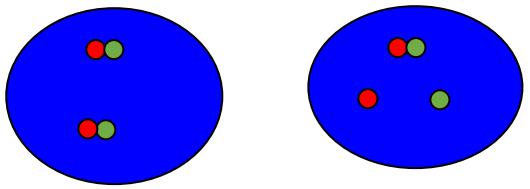
Note: *It is recommended to shake the probe with the pipette before use.*

The hybridization protocol for this probe is the following:

Denaturation: 80°C, 5 min

Hybridization: 43°C, 16 hours

INTERPRETATION:



Cell without translocation

Cell with translocation FOXO1

For the interpretation of the results of the fluorescence hybridization, it is recommended to apply the interpretation criteria in force and accepted worldwide.

WARNINGS AND PRECAUTIONS:

1. Avoid the contact of the reagents with the eyes and the mucous membranes. If the reagents come into contact with sensitive areas, wash them with plenty of water.
2. This product is harmful if swallowed.
3. Check with the local or state authorities about the recommended disposal method.
4. Avoid the microbial contamination of the reagents.

SAFETY RECOMMENDATIONS: The product is only intended for professional laboratory purposes, and it is not intended for pharmacological, home or any other type of use. The current version of the material safety data sheet of this product can be downloaded by searching its reference at www.vitro.bio or can be requested at regulatory@vitro.bio.

STORAGE: Keep refrigerated between 2 and 8ºC until

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CE IVD

the expiration date of the product. **DO NOT FREEZE THE PRODUCT.**

BIBLIOGRAPHY

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2: del Peso L, González VM, Hernández R, Barr FG, Núñez G. Regulation of the forkhead transcription factor FKHR, but not the PAX3-FKHR fusion protein, by the serine/threonine kinase Akt. Oncogene. 1999 Dec 2;18(51):7328-33.

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4: Nakae J, Kitamura T, Kitamura Y, Biggs WH 3rd, Arden KC, Accili D. The forkhead transcription factor Foxo1 regulates adipocyte differentiation. Dev Cell. 2003 Jan;4(1):119-29.

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LABEL AND BOX SYMBOLS

Explanation of the symbols of the product label and box:

	Expiration date
	Temperature limit
	Manufacturer
	Sufficient content for <n> assays
	Catalog number
	Lot code
	Refer to the instructions of use
	Medical product for *in vitro* diagnosis.
	Material safety data sheet
	Keep away from sunlight

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