

EWSR1 Break Apart FISH Probe

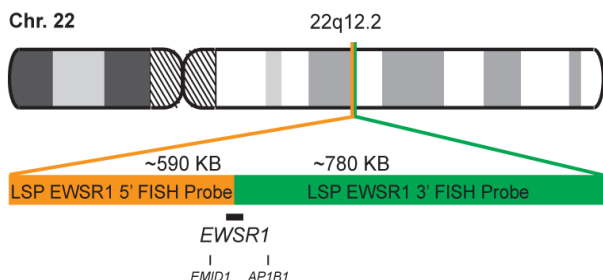
Ref: MAD-013M (10 test)

INTRODUCTION:

The rearrangements and abnormal expression of the EWSR1 gene (also known as EWS or bK984G1.4) have been described in numerous soft-tissue lesions. Depending on the other gene involved in the reciprocal translocation, the break of the EWSR1 gene can be involved in the pathogenesis of the desmoplastic small-round-cell tumor, Ewing's sarcoma/PNET, myxoid chondrosarcoma, soft-tissue myoepithelial tumor, myxoid liposarcoma, clear-cell sarcoma (soft-tissue melanoma), pulmonary myxoid sarcoma or hyalinizing clear cell carcinoma of salivary gland, among others. Thus, the presence of the EWSR1 gene rearrangement should be indicative, and the final diagnosis should be made by corroborating morphological, immunohistochemical and sometimes radiological facts.

INTENDED USE:

The EWSR1 Break Apart FISH probe is designed to detect rearrangements in the EWSR1 human gene located in the band of the chromosome 22q12.2. 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 EWSR1 such as deletions or amplifications.



PROBE DESCRIPTION:

The 5' centromeric fragment of the EWSR1 Break Apart FISH probe labeled with the fluorochrome CytoOrange covers the 5' portion (beginning) of the EWSR1 gene and some adjacent genomic sequences. The 3' telomeric fragment of the EWSR1 Break apart FISH probe labeled with CytoGreen covers the 3' part (end) as well as the adjacent and inferior sequences of the gene. Both probes are flanking sequences in the EWSR1 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-013M – EWSR1 Break Apart FISH Probe - 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).

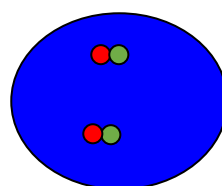
Note: It is recommended to shake the probe with the pipette before use.

The hybridization protocol for this probe is the following:

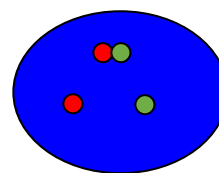
Denaturation: 80°C, 5 min

Hybridization: 43°C, 16 hours

INTERPRETATION:

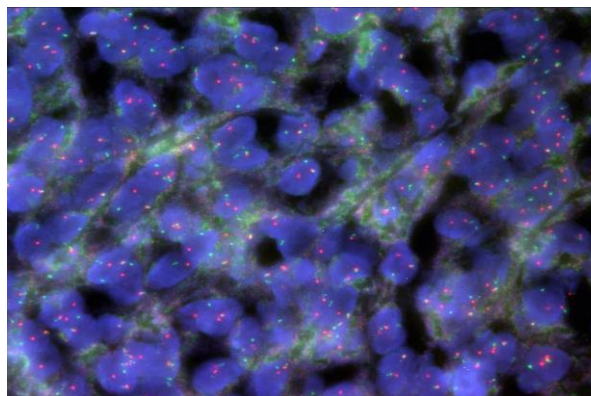


Cell without translocation



Cell with translocation EWSR1

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



Positive EWSR1 in Ewing's sarcoma

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 8°C until the expiration date of the product. **DO NOT FREEZE THE PRODUCT.**

BIBLIOGRAPHY

- 1: Ludwig JA. Ewing sarcoma: historical perspectives, current state-of-the-art, and opportunities for targeted therapy in the future. *Curr Opin Oncol.* 2008 Jul;20(4):412-8.
- 2: Erkizan HV, Uversky VN, Toretsky JA. Oncogenic partnerships: EWS-FLI1 protein interactions initiate key pathways of Ewing's sarcoma. *Clin Cancer Res.* 2010 Aug 15;16(16):4077-83.
- 3: Romeo S, Dei Tos AP. Soft tissue tumors associated with EWSR1 translocation. *Virchows Arch.* 2010 Feb;456(2):219-34.
- 4: Sohn EJ, Li H, Reidy K, Beers LF, Christensen BL, Lee SB. EWS/FLI1 oncogene activates caspase 3 transcription and triggers apoptosis in vivo. *Cancer Res.* 2010 Feb 1;70(3):1154-63.
- 5: Tanas MR, Rubin BP, Montgomery EA, Turner SL, Cook JR, Tubbs RR, Billings SD, Goldblum JR. Utility of FISH in the diagnosis of angiomatoid fibrous histiocytoma: a series of 18 cases. *Mod Pathol.* 2010 Jan;23(1):93-7.

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 <i>in vitro</i> diagnosis.
	Material safety data sheet
	Keep away from sunlight

