

# MDM2 (12q15) Red + Copy Control 12 Green

FISH Probe  
902-7029-102517

**BIOCARE**  
M E D I C A L

**Catalog Number:** PFR7029A  
**Description:** MDM2 (12q15) Red + Copy Control 12 Green FISH Probe  
**Dilution:** Ready-to-use  
**Volume:** 100  $\mu$ L

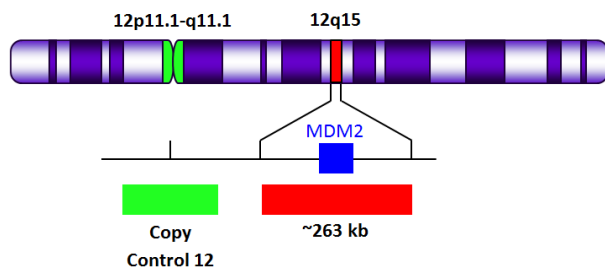
**Intended Use:**  
For Research Use Only. Not for use in diagnostic procedures.

## Summary and Explanation:

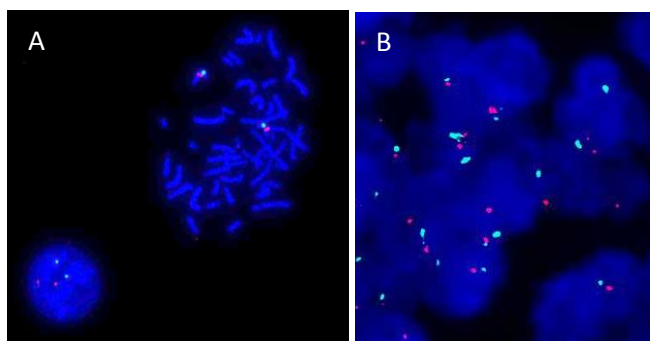
The MDM2 gene is located in the chromosomal region 12q15 and encodes for an E3 ubiquitin ligase which acts as a major negative regulator of the tumor suppressor p53<sup>1</sup>. Due to amplification of the respective chromosomal region, MDM2 is overexpressed in many human tumors such as soft tissue sarcomas, osteosarcomas<sup>2</sup>, gliomas, NSCLC, gastric and breast carcinomas.

## Principle of Procedure:

The MDM2 (12q15) Red Probe is designed to provide coverage of the 12q15 (~ 263 kb) region of chromosome 12. The Copy Control 12 Green Probe is designed to hybridize to human  $\alpha$ -satellite DNA sequences located at the centromere region of chromosome 12.



\*not to scale



A) MDM2 (12q15) Red + Copy Control 12 Green FISH probe hybridized on normal blood sample. Interphase and metaphase cellular states are shown. B) MDM2 (12q15) Red + Copy Control 12 Green FISH probe hybridized on FFPE tissue.

**Species Reactivity:** Human

## Known Application:

Fluorescence In-Situ Hybridization (FISH) on formalin-fixed paraffin embedded (FFPE) tissues.

**Supplied As:** Probe in hybridization buffer.

## Storage and Stability:

Store probe at -20°C and away from light. The product is stable to the expiration date printed on the label, when stored under these conditions. Do not use after expiration date.

## Technical Note:

Biocare Medical FISH probes are optimized to provide the best signal performance using optical filters that can accommodate the excitation/emission wavelengths specified below. Using filters outside these spectral specifications may produce sub-optimal results.

Fluorophore	Excitation (nm)	Emission (nm)
AQUA	432	472
GREEN	498	521
ORANGE	546	575
RED	593	618

## Limitations:

1. This product is Research Use Only.
2. It is the responsibility of the user to validate any test for its specific use.

## Precautions:

1. This product contains formamide, which may be toxic. Formamide may cause serious eye damage or reproductive toxicity. It may also cause irritation by inhalation or skin contact. Avoid any direct contact exposure to reagent. Take appropriate protective measures (use disposable gloves, protective glasses, and lab garments).
2. Specimens, before and after fixation, and all materials exposed to them should be handled as if capable of transmitting infection and disposed of with proper precautions. Never pipette reagents by mouth and avoid contacting the skin and mucous membranes with reagents and specimens. If reagents or specimens come in contact with sensitive areas, wash with copious amounts of water<sup>3</sup>.
3. The SDS is available upon request and is located at <http://biocare.net/>.

## Technical Support:

Contact Biocare Medical's Technical Support at 1-800-542-2002 for questions regarding this product.

## References:

1. Dual Roles of MDM2 in the Regulation of p53 Ubiquitination Dependent and Ubiquitination Independent Mechanisms of MDM2



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Rev. 062117

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Repression of p53 Activity. Dingding Shei and Wei Gu. Genes & Cancer March/April 2012 vol. 3 no. 3-4 240-248.

2. The E3 ubiquitin protein ligase MDM2 dictates all-trans retinoic acid-induced osteoblastic differentiation of osteosarcoma cells by modulating the degradation of RAR $\alpha$ . M Ying, L Zhang, Q Zhou, X Shao, J Cao, N Zhang, W Li, H Zhu, B Yang and Q He. Oncogene , (18 January 2016).
3. Clinical and Laboratory Standards Institute (CLSI). Protection of Laboratory workers from occupationally Acquired Infections; Approved Guideline-Fourth Edition CLSI document M29-A4 Wayne, PA 2014.



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