

CSF1R (5q32) Orange/ EGR1 (5q31.2) Green

FISH Probe
902-7046-102517

BIOCARE
M E D I C A L

Catalog Number: PFR7046A
Description: CSF1R (5q32) Orange/ EGR1 (5q31.2) Green FISH Probe
Dilution: Ready-to-use
Volume: 100 µL

Intended Use:

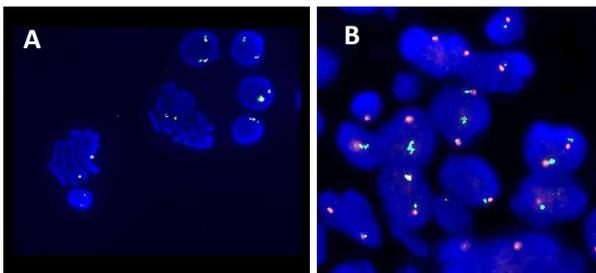
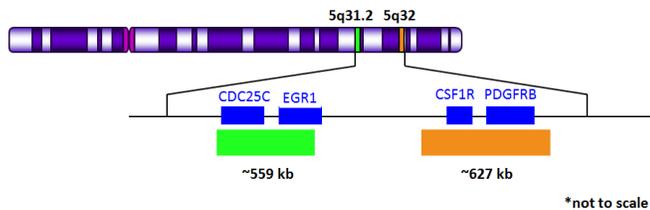
For Research Use Only. Not for use in diagnostic procedures.

Summary and Explanation:

The CSF1R gene is consistently lost by partial deletions occurring in chromosome 5 in patients with Myelodysplastic syndrome (MDS)¹. Specific deletion of the CSF1R gene has been detected in as many as 40% of MDS patients. Studies have also shown that up to 58% of all breast carcinomas and 85% of invasive breast carcinomas express higher levels of CSF1R compared to normal resting breast tissue^{2,3}. There also seems to be evidence to suggest that the expression of CSF1R in cervical cancer is usually associated with a more aggressive and invasive disease⁴. EGR aids in this diagnosis by helping determine whether there is a complete loss of chromosome 5 versus a 5q deletion (5q-) present in MDS⁵.

Principle of Procedure:

The CSF1R (5q32) Orange Probe is designed to provide coverage of the 5q32 (~ 627 kb) region of chromosome 5. The EGR1 Green Probe is designed to provide coverage of the 5q31.2 (~ 559 kb) region of chromosome 5.



A) CSF1R (5q32) Orange/ EGR1 (5q31.2) Green FISH probe hybridized on normal blood sample. Interphase and metaphase cellular states are shown. B) CSF1R (5q32) Orange/ EGR1 (5q31.2) Green FISH probe hybridized on an FFPE sample.

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 water⁶.
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. What lies beyond del(5q) in myelodysplastic syndrome? Vera Adema and Rafael Bejar. *Haematologica*. 2013 Dec; 98(12): 1819-1821
2. The role of CSF-1 in normal physiology of mammary gland and breast cancer: an update. Sapi E. *Exp Biol Med* (Maywood). 2004; 229 (1): 1-11.
3. Autocrine CSF-1R activation promotes Src-dependent disruption of mammary epithelial architecture. Wrobel CN,

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Debnath J, Lin E, Beausoleil S, Roussel MF, Brugge JS. J Cell Biol. 2004; 165 (2): 263-73.

4. Expression of the macrophage colony-stimulating factor and its receptor in gynecologic malignancies. Baiocchi G, Kavanagh J, Talpaz M, Wharton JT, Gutterman JU, Kurzrock R. Cancer 1991; 67 (4): 990-996
5. Biological and Prognostic Significance of Chromosome 5q Deletions in Myeloid Malignancies. Aristoteles A.N. Giagounidis, Ulrich Germing and Carlo Aul. Clin Cancer Res January 1, 2006 12; 5
6. 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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