XL t(14;18) IGH/MALT1 DF

Translocation/
Dual Fusion Probe

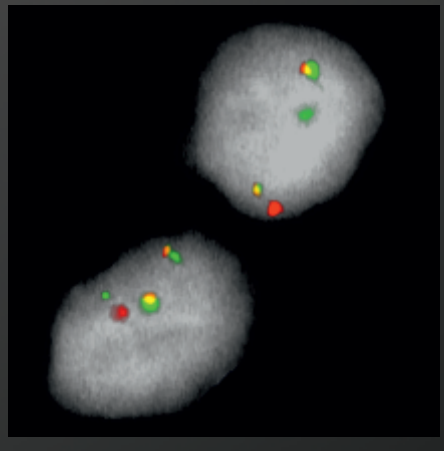
Order No.:
D-6020-100-OG

Description

XL t(14;18) IGH/MALT1 DF is designed as a dual fusion probe. The orange labeled probe covers the MALT1 gene at 18q21, the green labeled probe flanks the IGH breakpoint region at 14q32. This probe is intended for methanol/acetic-acid fixed cells and tissue sections.

Clinical Details

MALT (mucosa-associated lymphoid tissue) lymphomas occur at diverse anatomic sites and are closely linked to several distinct chronic inflammatory disorders. Up to 50% of the MALT lymphoma cases analyzed demonstrate MALT1 rearrangements. The MALT1 gene was originally identified by its involvement in the MALT lymphoma associated translocation t(11;18)(q21;q21). This rearrangement is detected in 30% of all cases of MALT lymphomas and leads to BIRC3-MALT1 fusions. It is restricted to MALT lymphomas and has not been detected in nodal or splenic marginal zone lymphomas, diffuse large B-cell lymphomas, or other non-Hodgkin lymphomas. Approximately 20 % of the MALT lymphoma cases analyzed are characterized by t(14;18)(q32;q21) leading to a IGH-MALT1 fusion. This reciprocal translocation juxtaposes MALT1 to transcriptional enhancers in the IGH locus and results in overexpression of the MALT1 gene. The distinct breakpoints on both chromosomes are precisely defined. The oncogenic potential of MALT1 is linked to its participation in the activation of nuclear factor-kappa B (NF-κB). This important transcription factor mediates the expression of anti-apoptotic, cell survival- and proliferation-promoting genes. Furthermore, there is emerging evidence indicating oncogenic cross-link between the above-mentioned genetic rearrangements and immunological stimulation, occurring during the pathogenesis of MALT lymphoma.



XL t(14;18) IGH/MALT1 DF hybridized to bone marrow cells, two aberrant cells are shown. A t(14;18) translocation has occurred generating a signal pattern of two colocalization/fusion signals, one green and one orange signal.

Clinical Applications

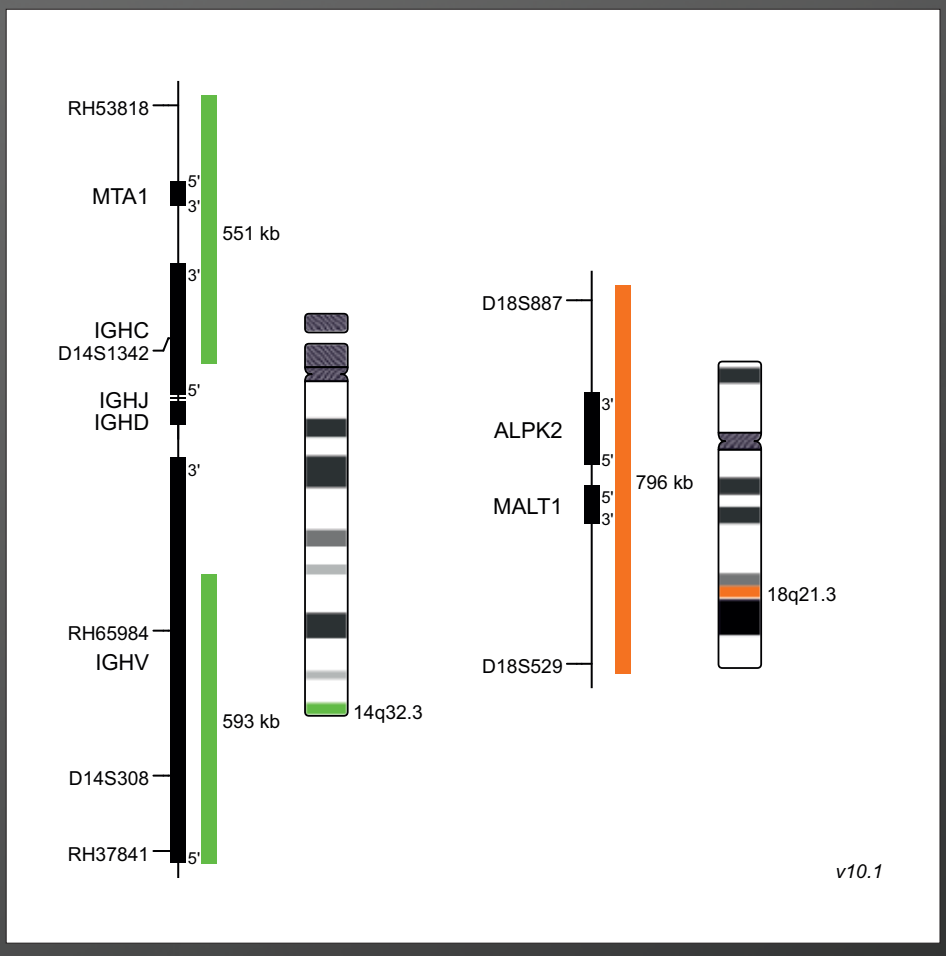
- NHL

Literature

- Streubel et al (2003) Blood 101:2335-2339
- Bacon et al (2007) J Clin Pathol 60:361-372
- Du (2017) Best Pract Res Clin Haematol 30:13-23

FACTSHEET

MetaSystems
Probes



Normal Cell: Two green (2G) and two orange (2O) signals.	
Aberrant Cell (typical results): One green (1G), one orange (1O), and two green-orange colocalization/fusion signals (2GO) resulting from a reciprocal translocation between the respective loci.	

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