

ZytoLight® SPEC GAS6/13q12 Dual Color Probe



Background

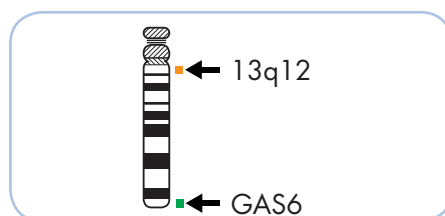
The ZytoLight® SPEC GAS6/13q12 Dual Color Probe is designed for the detection of amplifications of the chromosomal region harboring the GAS6 gene. The GAS6 (growth arrest-specific 6, a.k.a. AXSF, AXLLG) gene is located on chromosome 13q34 and encodes a ligand for the receptor tyrosine kinase family TAM which includes the proteins TYRO3, AXL, and MERTK. GAS6 has the highest affinity for AXL, followed by TYRO3, and MERTK. Binding of GAS6 to TAM receptors has been shown to promote proliferation and survival of cancer cells *in vitro*. GAS6 overexpression and its association with poorer prognosis has been reported in several human cancers including glioblastoma, pancreatic ductal adenocarcinoma, ovarian cancer, and cytogenetically normal acute myeloid leukemia. In patients with gastric cancer, high expression of GAS6 was shown to be associated with lymph node metastasis. GAS6 has been shown to be a target for overexpression and amplification in breast cancer positively correlating with a number of favorable prognostic markers including smaller tumor size. Hence, the identification of GAS6 gene copy number changes by Fluorescence *in situ* Hybridization may be of prognostic significance in various types of tumors. Moreover, interventions which inhibit GAS6 pathways could have therapeutic potential.

References

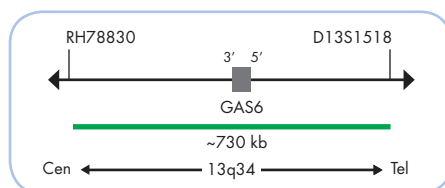
Abba MC, et al. (2007) Cancer Res 67: 4104-12.
Buehler M, et al. (2013) Biomed Res Int 2013: 238284.
Hutterer M, et al. (2008) Clin Cancer Res 14: 130-8.
Mc Cormack O, et al. (2008) Br J Cancer 98: 1141-6.
Nagata K, et al. (1996) J Biol Chem 271: 30022-7.
Song X, et al. (2011) Cancer 117: 734-43.
Verma A, et al. (2011) Mol Cancer Ther 10: 1763-73.
Whitman SP, et al. (2014) Leukemia 28: 1252-8.

Probe Description

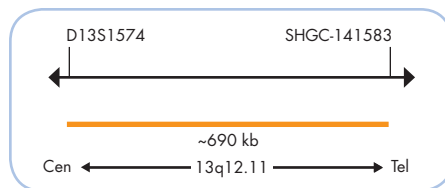
The SPEC GAS6/13q12 Dual Color Probe is a mixture of a green fluorochrome direct labeled SPEC GAS6 probe hybridizing to the human GAS6 gene in the chromosomal region 13q34 and an orange fluorochrome direct labeled SPEC 13q12 probe specific for 13q12.11. The SPEC 13q12 Probe is designed to hybridize in close proximity of centromere 13 at 13q12.11. Since chromosomes 13 and 21 share the same repetitive sequences, they cannot be differentiated by probes detecting centromere specific repeats.



Ideogram of chromosome 13 indicating the hybridization locations.



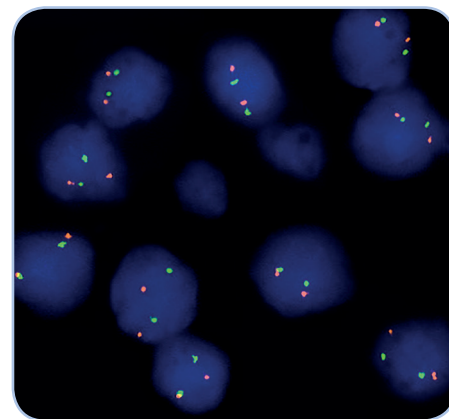
SPEC GAS6 Probe map (not to scale).



SPEC 13q12 Probe map (not to scale).

Results

In a normal interphase nucleus, two orange and two green signals are expected. In a cell with amplification of the GAS6 gene locus, multiple copies of the green signal or green signal clusters will be observed.



SPEC GAS6/13q12 Dual Color Probe hybridized to normal interphase cells as indicated by two orange and two green signals per nucleus.

Prod. No.	Product	Label	Tests* (Volume)
Z-2156-200	ZytoLight SPEC GAS6/13q12 Dual Color Probe CE IVD	●/●	20 (200 µl)
Related Products			
Z-2028-20	ZytoLight FISH-Tissue Implementation Kit CE IVD		20
Incl. Heat Pretreatment Solution Citric, 500 ml; Pepsin Solution, 4 ml; Wash Buffer SSC, 500 ml; 25x Wash Buffer A, 100 ml; DAPI/DuraTest-Solution, 0.8 ml			

* Using 10 µl probe solution per test. CE IVD only available in certain countries. All other countries research use only! Please contact your local dealer for more information.