

# ZytoLight® SPEC NRG1 Dual Color Break Apart Probe



## Background

The ZytoLight® SPEC NRG1 Dual Color Break Apart Probe (PL140) is intended to be used for the qualitative detection of translocations involving the human NRG1 gene at 8p12 in formalin-fixed, paraffin-embedded specimens by fluorescence *in situ* hybridization (FISH). The probe is intended to be used in combination with the ZytoLight® FISH-Tissue Implementation Kit (Prod. No. Z-2028-5/-20).

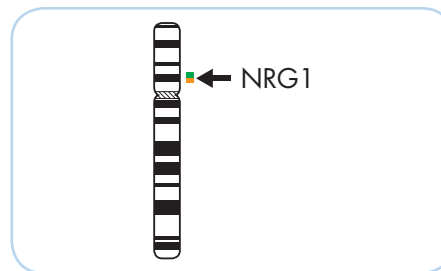
The product is intended for professional use only. All tests using the product should be performed in a certified, licensed anatomic pathology laboratory under the supervision of a pathologist/human geneticist by qualified personnel.

The probe is intended to be used as an aid to the differential diagnosis of various cancers and therapeutic measures should not be initiated based on the test result alone.

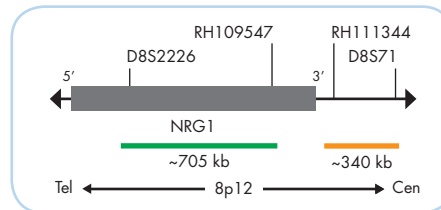
## Probe Description

The ZytoLight® SPEC NRG1 Dual Color Break Apart Probe is composed of:

- ZyGreen (excitation 503 nm/emission 528 nm) labeled polynucleotides (~10 ng/μl), which target sequences mapping in 8p12\*\* (chr8:31,730,448-32,433,429) distal to the NRG1 breakpoint region.
- ZyOrange (excitation 547 nm/emission 572 nm) labeled polynucleotides (~4.5 ng/μl), which target sequences mapping in 8p12\*\* (chr8:32,644,505-32,985,279) proximal to the NRG1 breakpoint region.
- Formamide based hybridization buffer



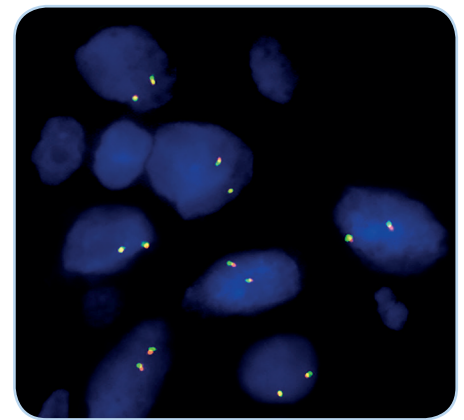
Ideogram of chromosome 8 indicating the hybridization locations.



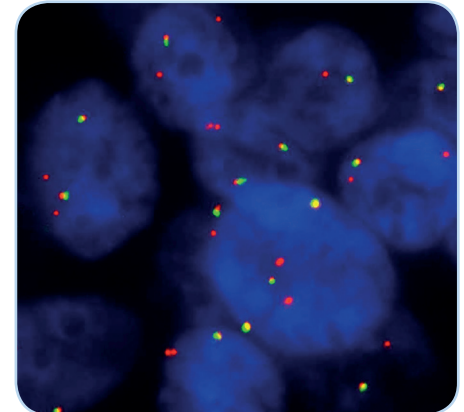
SPEC NRG1 Probe map (not to scale).

## Results

In an interphase nucleus lacking a translocation involving the 8p12 band, two orange/green fusion signals are expected representing two normal (non-rearranged) 8p12 loci. A signal pattern consisting of one orange/green fusion signal, one orange signal, and a separate green signal in lung adenocarcinoma specimens indicates one normal 8p12 locus and one 8p12 locus affected by a translocation.



SPEC NRG1 Dual Color Break Apart Probe hybridized on normal interphase cells as indicated by two orange/green fusion signals per nucleus.



Example of an aberrant signal pattern: Lung cancer tissue section with rearrangement of the NRG1 gene as indicated by extra orange signals.

Image kindly provided by Mc Leer A, Duruisseaux M, Wislez M, and colleagues, Grenoble and Paris, France.

Prod. No.	Product	Label	Tests* (Volume)
Z-2181-200	ZytoLight SPEC NRG1 Dual Color Break Apart Probe		20 (200 μl)
<b>Related Products</b>			
Z-2028-20	ZytoLight FISH-Tissue Implementation Kit		20
Incl. Heat Pretreatment Solution Citric, 500 ml; Pepsin Solution, 4 ml; Wash Buffer SSC, 560 ml; 25x Wash Buffer A, 100 ml; DAPI/DuraTect-Solution, 0.8 ml			

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

\*\*According to Human Genome Assembly GRCh37/hg19