

EGFR Green and Chromosome 7 Centromere Red DNA FISH Probe

70-0024ASR

0.1 mL, Ready-To-Use

Intended Use

Analyte Specific Reagent.
Analytical and performance characteristics are not established.

Description

The probe is a double-stranded DNA probe cocktail containing EGFR probe, 414 kb in size, labeled with green fluorescent dye (excitation 496 nm and emission 520 nm similar to FITC), and chromosome 7 centromere probe labeled with red fluorescent dye (excitation 589 nm and emission 615 nm, similar to Texas Red). The probe cocktail detects human EGFR gene at short arm of chromosome 7 (Green fluorescent signal) and alpha-satellites DNA D7Z1 (Red fluorescent signal) in standard cytology preparation by fluorescence in situ hybridization (FISH) methodology.

The human epidermal growth factor receptor (EGFR) gene, c-erb-B1, belongs to the c-erb-B proto-oncogene family. The EGFR gene consists of 28 exons, spans about 200kb, and encodes a 170-kDa transmembrane glycoprotein that possesses tyrosine kinase activity. The receptor is commonly activated by the binding of ligands such as EGF and TGF α . Normally, EGFR activation is regulated, driving cells into cell division for a limited time. But when cell regulation is disrupted, EGFR activation continues to produce a signaling cascade within cells.

EGFR gene amplification has been found to be associated with about 40% of glioblastoma multiforme, 8-20% of head and neck cancers, 8-14% of esophageal cancers, 9% of NSCLC, 3-6% of gastric cancers, and 2% of breast tumors.

Reagent provided

This probe is supplied as liquid in hybridization buffer in ready-to-use format.

Precautions

For professional users.

MSDS sheet may be obtained by either visiting www.genemed.com or obtained by contacting Genemed Technical Support.

Usage

Each lot is tested by FISH in cytogenetic metaphase/interphase preparation of normal lymphocyte and cultured cervical carcinoma cells in chamber slides. In these tests, the cervical carcinoma cells were fixed with ThinPrep PresevCyte Solution (Hologic Cat. No. 0200011), the probe and specimen are co-denatured at 80°C for 5 minutes and hybridized at 37°C overnight. After 0.5X SSC stringent wash at 72°C for 5 minutes (from Genemed 10-0029 20XSSC), the probe FISH signal in nucleus can be observed under fluorescent microscope equipment with DAPI, FITC, and Texas Red Filter sets.

Storage

Store at 2-8°C.

References

1. Wang F, et al. J Transl Med. 2013 Apr 4;11(1):90.
2. Alexander RE, et al. Modern Pathology (2013), 1–6.
3. Li YH, et al. Clin Cancer Res 2011;17:382-390.

Symbols



Catalog No.



Batch No.



Use By



Temperature Range

