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Product Data Sheet
20q13 (ZNF217) FISH Probe

Catalog#: F-ZNF217-(G,R,A,Y,D)

Gene Information:

ZNF217 (Zinc Finger Protein 217) binds to the promoters of target genes and functions as a gene expression repressor. Gene expression inhibition by ZNF217 binding promotes cell proliferation and inhibits cell death.

Clinical Relevance:

Barrett's Esophagus: Copy number increases in ERBB2 (17q12), MYC (8q24), or ZNF217 (20q13) are associated with high grade dysplasia/ adenocarcinoma while copy number decrease of the 9p21 locus is associated with low or high grade dysplasia. Additional studies have shown increased risk of recurrence in patients who have copy number increases in either ERBB2, MYC, ZNF217 or copy number decrease in 9p21.[1,2]

Ovarian Cancer: Genomic amplification of the 20q13 locus is commonly observed in ovarian cancer and is believed to be an early event the development of the disease. Research has indicated that ZNF217 amplification may contribute to ovarian cancer invasion and metastasis, and associated with worse clinical outcome.[3]

Colorectal Cancer (CRC): Research has shown that ZNF217 expression was aberrantly upregulated in CRC and associated with poor overall survival of CRC patients. Anti ZNF217 treatments in CRC are being investigated.[4]

Breast Cancer: Genomic amplifications of 20q13 and ZNF217 are commonly observed in breast cancer. Research has shown that high levels of ZNF217 expression are associated with poor prognosis and the development of metastases in breast cancer.[5]

Probe Specifications:

Probe and target gene boundaries are indicated in relation to proximity to the centromere or telomere. Positions are based on UCSC genome assembly GRCh37/hg19.

Locus	Target			Probe		
	Gene	Centromere	Telomere	Centromere	Telomere	Size (Kb)
20q13	ZNF217	52,183,610	52,199,636	52,026,197	52,404,557	378

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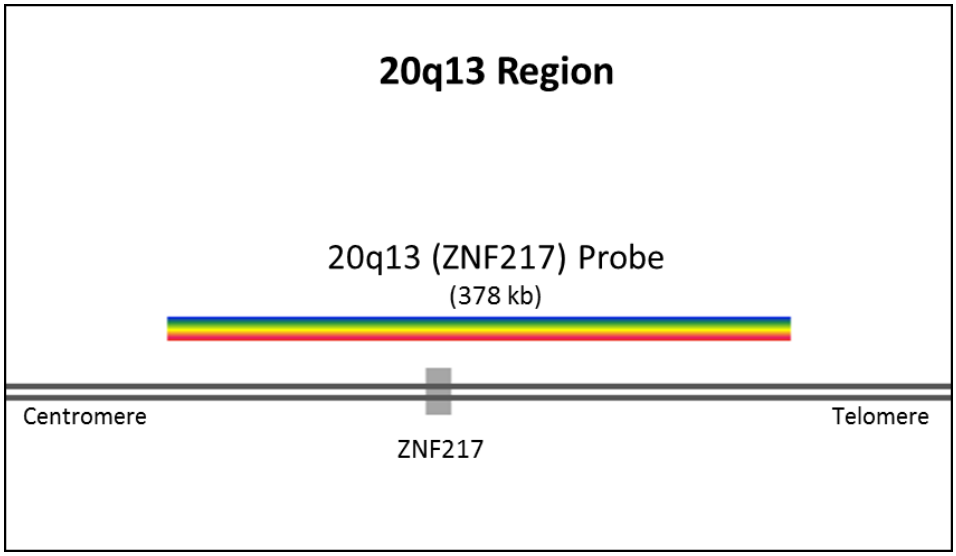
Probe Specifications:



Product Contents:

All individual or FISH probe cocktails are provided ready to use in hybridization buffer and can be blended with up to 4 total probes. Blocking DNA is included to suppress non-specific binding to similar sequences outside of the indicated binding sites. Researchers are advised to optimize slide processing and hybridization conditions.

Volume: 250µl
Reactions: 50 (5µl/ reaction)

Product Options:

All FISH probes are available in 5 standard color options (Red, Gold, Yellow, Green, and Aqua). Alternative custom color options are available.

Color	Dye	Absorbance	Emission	Ordering Code Extension
Red	Alexa594	590	615	R
Gold	Alexa555	555	565	D
Yellow	Alexa532	532	554	Y
Green	Alexa488	495	519	G
Aqua	DEAC	432	472	A

Storage:

Store at -20°C
Protect from direct light.

References:

1. Prasad GA, Wang KK, Halling KC, Buttar NS, Wongkeesong LM, Zinsmeister AR, Brankley SM, Westra WM, Lutzke LS, Borkenhagen LS, Dunagan K.: Correlation of histology with biomarker status after photodynamic therapy in Barrett esophagus. Cancer. 2008 Aug 1;113(3):470-6.

2. Brankley SM, Wang KK, Harwood AR, Miller DV, Legator MS, Lutzke LS, Kipp BR, Morrison LE, Halling KC.: The development of a fluorescence in situ hybridization assay for the detection of dysplasia and adenocarcinoma in Barrett's esophagus. J Mol Diagn. 2006 May;8(2):260-7.

3. Li J, Song L, Qiu Y, Yin A, Zhong M. ZNF217 is associated with poor prognosis and enhances proliferation and metastasis in ovarian cancer. Int J Clin Exp Pathol. 2014 May 15;7(6):3038-47. eCollection 2014. PubMed PMID: 25031722; PubMed Central PMCID: PMC4097264.

4. Li Z, Du L, Dong Z, Yang Y, Zhang X, Wang L, Li J, Zheng G, Qu A, Wang C. MiR-203 suppresses ZNF217 upregulation in colorectal cancer and its oncogenicity. PLoS One. 2015 Jan 26;10(1):e0116170. doi: 10.1371/journal.pone.0116170. eCollection 2015. PubMed PMID: 25621839; PubMed Central PMCID: PMC4306553.

5. Vendrell JA, Thollet A, Nguyen NT, Ghayad SE, Vinot S, Bièche I, Grisard E, Josserand V, Coll JL, Roux P, Corbo L, Treilleux I, Rimokh R, Cohen PA. ZNF217 is a marker of poor prognosis in breast cancer that drives epithelial-mesenchymal transition and invasion. Cancer Res. 2012 Jul 15;72(14):3593-606. doi: 10.1158/0008-5472.CAN-11-3095. Epub 2012 May 16. PubMed PMID: 22593193.