

ERG Translocation

Now Patented

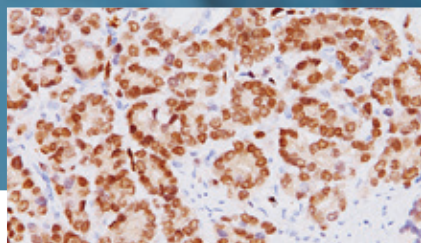
99.9%
Specificity

Features

- ▶ ERG positive PIN associated with 96.5% of positive carcinoma*
- ▶ 99.9% specific for prostate carcinoma with clone 9FY
- ▶ No cross-reactivity with infiltrating T- and B- cells

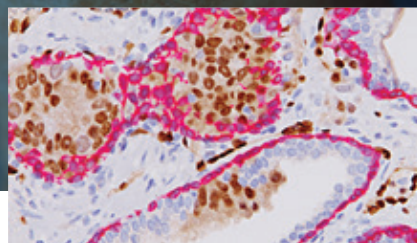
Know.

ERG



Prostate cancer stained with ERG [9FY] antibody

ERG-2 (ERG + CK5)



ERG-2 (ERG (DAB) + CK5 (FR)) in prostate cancer and PIN

ERG translocation:

The molecular hallmark of a new class of prostate cancer

Present in 50-70% of all prostate carcinomas, ERG oncoprotein expression has been shown to be a highly specific marker for prostate cancer. Given the lack of ERG expression in a wide variety of normal epithelial tissues and tumors, and its robust presence in prostatic adenocarcinoma, detection of ERG expression by 9FY offers a definitive marker of adenocarcinoma of prostatic origin. The ERG oncogene is frequently overexpressed due to chromosomal translocations involving ERG and regulatory sequences of the TMPRSS2 or other androgen responsive genes.

The mouse monoclonal anti-ERG antibody, clone 9FY, exhibits an unprecedented 99.9% specificity for detecting prostatic adenocarcinoma. Independent reports demonstrate 97-100% correlation between the expression of the ERG protein and the presence of TMPRSS2:ERG rearrangement and a remarkable concordance (96.5%) of ERG positive prostatic intraepithelial neoplasia (PIN) and ERG positive carcinoma in prostatectomy specimens.

Detection of ERG expression by 9FY offers a rare, but definitive marker of adenocarcinoma of prostatic origin, and unique opportunities to indicate oncogenic activations in PIN, to stratify prostate cancer patients for ERG oncogene status and to monitor treatment efficacy. Towards the stratification of patients, comparative evaluations of ERG protein expression status with 9FY and TMPRSS2-ERG gene fusions in hormone-naïve and castration resistant prostate cancers have shown promises for defining a subgroup of cases with dysregulated androgen signaling pathway.

Further utilities for using the mouse monoclonal anti-ERG antibody, 9FY, has been shown in detecting vascular endothelium and endothelial malignancies, including Kaposi sarcoma. Reports have also demonstrated the superior performance of 9FY in chromatin immunoprecipitation (ChIP), immunofluorescence (IF) and immunoblot assays.

Notes: Clone 9FY (U.S Patent 8,765,916) was developed by the Center for Disease and Prostate Research with the Henry Jackson Foundation for the Advancement of Military Medicine, Rockville, Maryland, USA. This antibody is highly specific (99.9%) and does not cross-react with infiltrating lymphocytes.

References

- 1) Petrovics G, *et al.* Frequent overexpression of ETS related gene-1 (ERG1) in prostate cancer transcriptome. *Oncogene*. 2005 May 26; 24 (23):3847-52.
- 2) Rosen P, *et al.* ERG oncoprotein portrait in prostate cancer. *Nat Rev Urol*. 2012 Feb 14, 9(3):131-7.
- 3) Furusato B, *et al.* ERG oncoprotein expression in prostate cancer: clonal progression of ERG positive tumor cells and potential for ERG based stratification. *Prostatic Dis*, 2010 Sep; 13(3):228-37.
- 4) Braun M, *et al.* ERG protein expression and genomic rearrangement status in primary and metastatic prostate cancer - a comparative study of two monoclonal antibodies. *Prostate Cancer Prostatic Dis*. 2012 Jun; 15(2):165-9.
- 5) Miettinen M, *et al.* ERG transcription factor as an immunohistochemical marker for vascular endothelial tumors and prostatic carcinoma. *Am J Surg Pathol*. 2011 Mar; 35(3):432-46.
- 6) Mohamed AA, *et al.* Ets Family Protein, Erg Expression in Developing and Adult Mouse Tissues by a Highly Specific Monoclonal Antibody. *J Cancer*. 2010 Oct 25;1:197-208.
- 7) Mohamed AA, *et al.* ERG oncogene modulates prostaglandin signaling in prostate cancer cells. *Cancer Biol Ther*. 2011 Feb 15; 11(4):410-7.

Ordering Information

Product Name	Concentrate	Predilute	ONCORE	VP
ERG	CM 421 A, C	PM 421 AA	OAI 421 T60	VP 421 G
ERG (M), 2X	N/A	API 3017 AAK	N/A	N/A
ERG-2 (ERG + CK5)	N/A	API 437DS AA	N/A	N/A

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