ERG Translocation

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.

Prostate cancer stained with ERG (9FY) antibody

ERG

ERG-2 (ERG + CK5)

ERG + AMACR

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

ERG (DAB) + AMACR (FR) in prostate cancer

*in prostatectomy specimens
ERG translocation:
The molecular hallmark of a new class of prostate cancer

Present in 50-70% of all prostate carcinomas, ERG oncprotein 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.

Recently, a mouse monoclonal anti-ERG antibody, clone 9FY, was developed showing 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 dispensed androgen signaling pathway.

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

Notes: Clone 9FY [PATENT PENDING] 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