Estrogen Receptor, Clone ERa078 (Concentrate)

Description:

Species:	Mouse
Immunogen:	A recombinant fragment specific to human estrogen receptor protein was used as the immunogen for the ERa078 antibody.
Clone:	ERa078
Isotype:	Mouse IgG1, Kappa
Format:	This antibody is provided in a phosphate buffered saline containing 1% BSA.
Specificity:	This antibody is specific for estrogen receptor.
Background:	The estrogen receptor (ER) is a ~ 67kDa protein, originally described by Jensen and Jacobson, 1962 as a uterine protein which bound 3H-estradiol with high affinity. More than two decades later the cDNA encoding the human estrogen receptor was finally cloned and sequenced. The estrogen receptor gene consists of more than 140kb of genomic DNA divided into 8 exons, being translated into a protein with six functionally discrete domains, labeled A through F. The A/B domain of the estrogen receptor contains a constitutively active transcription activation function called TAF-1. Domain C contains two Cys4 zinc fingers, which form the core of the DNA binding domain; it also contains a weak constitutive dimerization activity. The zinc fingers interact with DNA, and the ER homodimer appears to bind most tightly to the palindromic estrogen response element (ERE) sequence GGATCNNNGATCC. The hinge domain D appears to be the location for binding by heat shock proteins. The estrogen receptor is an important regulator of growth and differentiation in the mammary gland. Estrogens play an important role also in breast cancer development, although tumors often progress towards an autocrine growth. This hormone-independence and the incomplete correlation between ER-status and response to endocrine (tamoxifen) therapy may be explained by the presence of receptor variants with either constitutive transcriptional activity or a dominant negative inhibition of normal ER function. Many investigators have reported on the isolation of cDNAs which encode variant ER sequences. Many of these variants appear to be formed by errors in RNA splicing which result in one or more exons being lost during processing of the ER message.
Species Reactivity:	Human.
Positive Control:	Breast carcinoma.
Cellular Localization:	Nuclear.
Titer/Working Dilution:	Immunohistochemistry: 1:100 – 1:200
Microbiological State:	This product is not sterile.

Uses/Limitations:
Not to be taken internally.
For Research Use Only.
This product is intended for qualitative immunohistochemistry with normal and neoplastic formalin-fixed, paraffin-embedded tissue sections, to be viewed by light microscopy.
Do not use if reagent becomes cloudy.
Do not use past expiration date.
Use caution when handling reagents.
Non-Sterile.

Procedure: We suggest an incubation period of 30-60 minutes at room temperature or overnight at 2-8 C. Staining of formalin fixed, paraffin embedded tissue sections is significantly enhanced by pretreatment with citrate-based antigen retrieval. However, depending upon the fixation conditions and the staining system employed, optimal incubation should be determined by the user. For maximum staining intensity, we recommend using AviBond Ultra for detection and DAB Clarity Ultra products for visualization.

Precautions:
Contains sodium azide as a preservative (0.09% w/v).
Do not pipette by mouth.
Avoid contact of reagents and specimens with skin and mucous membranes.
Avoid microbial contamination of reagents or increased nonspecific staining may occur.
This product contains no hazardous material at a reportable concentration according to U.S. 29 CFR 1910.1200, OSHA Hazardous Communication Standard and EC Directive 91/155/EC.

References:

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11. Walter P; Green S; Greene G; Krust A; Bornert JM; Jeltsch JM; Staub A; Jensen E; Scrace G; Waterfield M; et al. Proc Nat Academy of Sciences of the United States of America, 1985, 82(23):7889-93.

Warranty:
No products or "Instructions For Use (IFU)" are to be construed as a recommendation for use in violation of any patents. We make no representations, warranties or assurances as to the accuracy or completeness of information provided on our IFU or website. Our warranty is limited to the actual price paid for the product. Teomics, LLC is not liable for any property damage, personal injury, time or effort or economic loss caused by our products. Immunohistochemistry is a complex technique involving both histological and immunological detection methods. Tissue processing and handling prior to immunostaining can cause inconsistent results. Variations in fixation and embedding or the inherent nature of the tissue specimen may cause variations in results. Endogenous peroxidase activity or pseudoperoxidase activity in erythrocytes and endogenous biotin may cause non-specific staining depending on detection system used.