Estrogen Receptor beta Polyclonal Antibody
Catalog Number PA1-312

Details
Size 50 µg
Host/Isotope Rabbit / IgG
Class Polyclonal
Type Antibody
Immunogen Synthetic peptide corresponding to residues C(467) C S T E D S K N K E G S Q N L Q S Q(485) of mouse ER beta.
Conjugate Unconjugated
Form Liquid
Concentration 1 mg/mL
Storage Conditions -20° C, Avoid Freeze/Thaw Cycles

Published Applications
- Western Blot (WB)
- Immunohistochemistry (IHC)
- Immunocytochemistry (ICC/IF)

Species Reactivity
- Tested Applications Dilution *
  - Immunohistochemistry (IHC) 1-2 µg/mL
  - Western Blot (WB) 2 µg/mL
  - Immunocytochemistry (ICC/IF) 1:50-1:200

Published Applications
- Western Blot (WB) See 3 publications below

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Published Applications
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Suggested working dilutions are given as a guide only. It is recommended that the user titrate the product for use in their own experiment using appropriate negative and positive controls.


Background/Target Information
Estrogen Receptor beta (ER beta, NR3A2) protein is approximately 55kD, though multiple isoforms ranging from 36-59kD have been described. Human ER beta was initially cloned and characterized from tissues. Estrogen Receptors (ER) are members of the steroid/thyroid hormone receptor superfamily of nuclear receptors. The estrogen receptor is a ligand-activated transcription factor, that when bound to estrogen hormone, induces a conformational change that allows dimerization and binding to estrogen response elements (ERE) in DNA. When bound to EREs, ER can positively or negatively regulate gene transcription through the recruitment of coactivator or corepressor proteins. There are two different forms of the estrogen receptor, alpha and beta, encoded by separate genes (ESR1 and ESR2, respectively). Estrogen receptor beta (ER beta) binds estrogens with an affinity similar to that of estrogen receptor alpha. Some ER beta isoforms dominantly inhibit the activity of estrogen receptor alpha in reproductive tissues. ER beta is found widely in many tissues throughout the body and can act as a potent tumor suppressor, playing a crucial role in many cancer types such as prostate cancer, autism spectrum disorder, medullary thyroid carcinoma, De Quervain Disease and risk of cardiovascular disease.

Estrogen Receptor beta Antibody (PA1-312) in ICC/IF
Immunofluorescent analysis of Estrogen Receptor beta (ER-beta, green) in HeLa cells. Formalin fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 10 minutes at room temperature and blocked with 5% normal goat serum (Product # 31873) for 15 minutes at room temperature. Cells were probed with an ER-beta polyclonal antibody (Product # PA1-312) at a dilution of 1:100 for at least 1 hour at room temperature. Cells were then washed with PBS and incubated with DyLight 488 goat anti-rabbit IgG secondary antibody (Product # 35552) at a dilution of 1:200 for 30 minutes at room temperature. Nuclei (blue) were stained with Hoechst 33342 dye (Product # 62249). Images were taken on a Thermo Scientific ArrayScan at 20X magnification.

Estrogen Receptor beta Antibody (PA1-312) in WB
Western blot analysis of Estrogen Receptor beta (ER-beta) was performed by loading 50 µg of the indicated whole cell lysates onto a 4-20% Tris-HCl polyacrylamide gel. Proteins were transferred to a PVDF membrane and blocked with 5% BSA/TBST for at least 1 hour. The membrane was probed with an ER-beta polyclonal antibody (Product # PA1-312) at a dilution of 1:1000 overnight at 4C on a rocking platform, washed in TBS-0.1%Tween-20, and probed with a goat anti-rabbit IgG HRP secondary antibody (Product # 31460) at a dilution of 1:15,000 for at least 1 hour. Chemiluminescent detection was performed using SuperSignal West Dura (Product # 34075).
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