

Product datasheet

Anti-Estrogen Receptor beta antibody ab3576

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Overview

Product name	Anti-Estrogen Receptor beta antibody
Description	Rabbit polyclonal to Estrogen Receptor beta
Host species	Rabbit
Specificity	By Western blot, this antibody detects an ~55 kDa protein representing ER beta from Rat brain homogenate. Immunocytochemical staining of ER beta in cells overexpressing the Human protein results in nuclear staining.
Tested applications	Suitable for: IHC-P, IHC-Fr, ICC, WB, Inhibition Assay, ICC/IF
Species reactivity	Reacts with: Mouse, Rat, Sheep, Human, Pig, Non human primates Predicted to work with: Hamster 
Immunogen	Synthetic peptide corresponding to Rat Estrogen Receptor beta aa 467-485. Sequence: CSSTEDSKNKESSQNLQSQ (Peptide available as ab5018)  Run BLAST with  Run BLAST with
Positive control	WB: Rat brain lysate IHC: testis, efferent ductules, epididymis, and vas deferens (see Zhou et al), Rat ovary (see Sanchez-Criado)

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.
Storage buffer	Preservative: 0.05% Sodium azide Constituents: 0.1% BSA, 99% PBS
Purity	Immunogen affinity purified
Clonality	Polyclonal
Isotype	IgG

Applications

Our [Abpromise guarantee](#) covers the use of **ab3576** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
IHC-P		1/50. Perform heat mediated antigen retrieval via the microwave method before commencing with IHC staining protocol.
IHC-Fr		1/50.
ICC		1/100 - 1/1000.
WB		Use a concentration of 1 µg/ml. Detects a band of approximately 55 kDa (predicted molecular weight: 59 kDa). Can be blocked with Estrogen Receptor beta peptide (ab5018) .
Inhibition Assay		Use at an assay dependent concentration.
ICC/IF		1/100 - 1/1000.

Target

Function

Nuclear hormone receptor. Binds estrogens with an affinity similar to that of ESR1, and activates expression of reporter genes containing estrogen response elements (ERE) in an estrogen-dependent manner. Isoform beta-cx lacks ligand binding ability and has no or only very low ere binding activity resulting in the loss of ligand-dependent transactivation ability. DNA-binding by ESR1 and ESR2 is rapidly lost at 37 degrees Celsius in the absence of ligand while in the presence of 17 beta-estradiol and 4-hydroxy-tamoxifen loss in DNA-binding at elevated temperature is more gradual.

Tissue specificity

Isoform beta-1 is expressed in testis and ovary, and at a lower level in heart, brain, placenta, liver, skeletal muscle, spleen, thymus, prostate, colon, bone marrow, mammary gland and uterus. Also found in uterine bone, breast, and ovarian tumor cell lines, but not in colon and liver tumors. Isoform beta-2 is expressed in spleen, thymus, testis and ovary and at a lower level in skeletal muscle, prostate, colon, small intestine, leukocytes, bone marrow, mammary gland and uterus. Isoform beta-3 is found in testis. Isoform beta-4 is expressed in testis, and at a lower level in spleen, thymus, ovary, mammary gland and uterus. Isoform beta-5 is expressed in testis, placenta, skeletal muscle, spleen and leukocytes, and at a lower level in heart, lung, liver, kidney, pancreas, thymus, prostate, colon, small intestine, bone marrow, mammary gland and uterus. Not expressed in brain.

Sequence similarities

Belongs to the nuclear hormone receptor family. NR3 subfamily.
Contains 1 nuclear receptor DNA-binding domain.

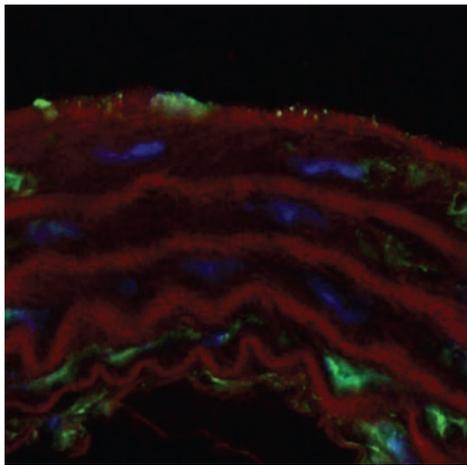
Domain

Composed of three domains: a modulating N-terminal domain, a DNA-binding domain and a C-terminal ligand-binding domain.

Cellular localization

Nucleus.

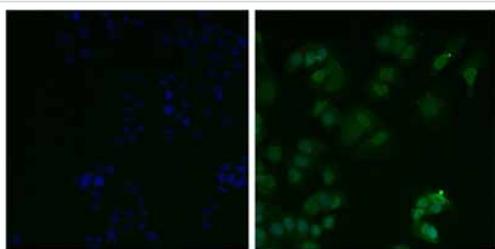
Images



Immunohistochemistry (Frozen sections) - Anti-Estrogen Receptor beta antibody (ab3576)

Image from Novensà L et al., PLoS One. 2011;6(9):e25335. Epub 2011 Sep 22. Fig 4.; doi:10.1371/journal.pone.0025335; PLoS ONE 6(9): e25335.

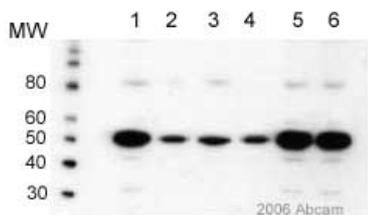
Immunofluorescence analysis of frozen murine thoracic aorta, staining Estrogen Receptor beta with ab3576 at 1/50 dilution (green: not merged with nucleus, or purple: merged with nucleus). Nuclei were stained with DAPI (blue) and actin fibers were stained red.



- Secondary antibody ER-beta antibody Secondary antibody

Immunocytochemistry/ Immunofluorescence - Anti-Estrogen Receptor beta antibody (ab3576)

Immunofluorescent analysis using Estrogen Receptor beta polyclonal antibody (ab3576) shows nuclear localization of Estrogen Receptor beta in MCF7 cells. Formalin fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 10 minutes at room temperature. Cells were blocked with 1% BSA for 15 minutes at room temperature. Cells were probed with a rabbit polyclonal antibody recognizing Estrogen Receptor beta (ab3576), at a dilution of 1:100 for 1 hour at room temperature. Cells were washed with PBS and incubated with DyLight 488 goat-anti-rabbit IgG secondary antibody at a dilution of 1:400 for 30 minutes at room temperature. Nuclei (blue) were stained with Hoechst 33342 dye. Images were taken at 20X magnification.



Western blot - Anti-Estrogen Receptor beta antibody (ab3576)

All lanes : Anti-Estrogen Receptor beta antibody (ab3576) at 1/2000 dilution

Lane 1 : CAL region of Human brain - Whole cell lysate

Lane 2 : EC region of Human brain - Whole cell lysate

Lane 3 : HIP region of Human brain - Whole cell lysate

Lane 4 : IT region of Human brain - Whole cell lysate

Lane 5 : MF region of Human brain - Whole cell lysate

Lane 6 : SP region of Human brain - Whole cell lysate

Secondary

All lanes : HRP conjugated Donkey Anti-rabbit IgG

Predicted band size: 59 kDa

Observed band size: 55 kDa

[why is the actual band size different from the predicted?](#)

This image is courtesy of an Abreview submitted on **3 February 2006**.



Immunolocalization of ER beta from CHO cells overexpressing the Human protein, using ab3576 (1ug/ml).

Immunocytochemistry - Anti-Estrogen Receptor beta antibody (ab3576)

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