**Product datasheet**

**Anti-Estrogen Receptor beta antibody [14C8] ab288**

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**Overview**

**Product name**
Anti-Estrogen Receptor beta antibody [14C8]

**Description**
Mouse monoclonal [14C8] to Estrogen Receptor beta

**Host species**
Mouse

**Specificity**
14C8 is specific for human ER-beta. The antibody has been tested in WB against recombinant protein. It has not yet been tested in our laboratory using any cell lysates and several publications suggest it can give weak bands in breast tumour extracts lysate. Strong Erb staining in epithelial cell nuclei. Occasional weak to moderate staining is seen in surrounding stromal and endothelial cell nuclei. Sporadic light cytoplasmic staining is sometimes observed. We have also successfully detected ERb in colon and ovarian tumors using the same antibody.

**Tested applications**
Suitable for: WB, Flow Cyt, IHC-P, ICC/IF, IHC-Fr

**Species reactivity**
Reacts with: Mouse, Human, Monkey, Baboon

**Immunogen**
Recombinant fragment corresponding to Human Estrogen Receptor beta aa 1-153. Expressed in E.coli.
Database link: Q92731

**Positive control**
WB: Recombinant fusion protein, human liver and intestine. IHC-P: endocervical epithelium, Lobular breast carcinoma.

**General notes**
This product was changed from ascites to tissue culture supernatant on 23rd October 2018. Please note that the dilutions may need to be adjusted accordingly. If you have any questions, please do not hesitate to contact our scientific support team.

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**Properties**

**Form**
Liquid

**Storage instructions**
Shipped at 4°C. Upon delivery aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw cycles.

**Storage buffer**
pH: 7.40
Constituent: PBS

**Purity**
Immunogen affinity purified

**Purification notes**
Purified from TCS

**Clonality**
Monoclonal

**Clone number**
14C8
Myeloma
Isotype
Light chain type

NS1
IgG2b
kappa

Applications

Our Abpromise guarantee covers the use of ab288 in the following tested applications.
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

<table>
<thead>
<tr>
<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>WB</td>
<td></td>
<td>Use a concentration of 1 - 5 µg/ml. Predicted molecular weight: 59 kDa.</td>
</tr>
<tr>
<td>Flow Cyt</td>
<td>1/25. ab170192</td>
<td>Mouse monoclonal IgG2b, is suitable for use as an isotype control with this antibody.</td>
</tr>
<tr>
<td>IHC-P</td>
<td></td>
<td>Use a concentration of 5 µg/ml.</td>
</tr>
<tr>
<td>ICC/IF</td>
<td></td>
<td>Use at an assay dependent concentration.</td>
</tr>
<tr>
<td>IHC-Fr</td>
<td></td>
<td>Use at an assay dependent concentration.</td>
</tr>
</tbody>
</table>

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 estrogen 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.
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Estrogen Receptor beta antibody [14C8] (ab288)

ab288 staining Estrogen Receptor beta in infiltrating lobular carcinoma of the human breast tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with paraformaldehyde. Endogenous peroxidase blocking was with 3% H₂O₂ at room temperature for 30 minutes. Blocking with 1.5% goat serum (dilute goat serum by 1xPBS), at room temperature for 30min; antigen retrieval was by heat mediation in a citrate buffer, pH 6.0, 15min (Cuisinart Electric Pressure Cooker #EPC-1200, choose "high pressure"). Samples were incubated with primary antibody (1/100) for overnight at 4°C. An ABC HRP Kit Mouse IgG) was used as the secondary antibody (1/200), room temperature for 30min. Washed twice for 5 minutes using PBS. DAB was used as a substrate.

All lanes: Anti-Estrogen Receptor beta antibody [14C8] (ab288) at 1/500 dilution

All lanes: Human brain

Lysates/proteins at 30 µg per lane.

Secondary

All lanes: Mouse IgG antibody (HRP) at 1/5000 dilution

Developed using the ECL technique.

Predicted band size: 59 kDa

Western blot - Anti-Estrogen Receptor beta antibody [14C8] (ab288)

7.5% gel.

Running condition: 80V, 15min; 140V, 40min.

Transfer condition: Semi-dry, 18 V, 60min (NC membrane)

blocking condition: 5% non-fat milk in TBST, RT, 60min.

primary antibody incubation: 4°C overnight.

Secondary antibody incubation: room temperature for 1 hour.

Washing conditions: 5 ml TBST, 4 x 5min.

ECL exposure.
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Estrogen Receptor beta antibody [14C8] (ab288) staining endocervical epithelium by IHC-P.

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