Overview

Product name: Anti-Estrogen Receptor alpha antibody [SP1] ab16660

Description: Rabbit monoclonal [SP1] to Estrogen Receptor alpha

Host species: Rabbit

Tested applications: Suitable for: WB, IHC-P, ICC/IF, IHC-FoFr

Species reactivity: Reacts with: Human

Predicted to work with: Mouse, Pig

Immunogen: Synthetic peptide corresponding to Human Estrogen Receptor alpha (C terminal). Database link: P03372

Epitope: C-terminal

Positive control: WB: MCF7 cell lysate. IHC-P: Human breast carcinoma, cervix, breast, breast ductal carcinoma and ovarian adenocarcinoma tissue. ICC/IF: MCF7 cells. IHC-Fr: Mouse intestine tissue.

Properties

Form: Liquid


Storage buffer: pH: 7.50
Preservative: 0.1% Sodium azide
Constituents: 1% BSA, Tris buffered saline

Purity: Tissue culture supernatant

Clonality: Monoclonal

Clone number: SP1

Isotype: IgG

Applications

Our Abpromise guarantee covers the use of ab16660 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.
Nuclear hormone receptor. The steroid hormones and their receptors are involved in the regulation of eukaryotic gene expression and affect cellular proliferation and differentiation in target tissues. Can activate the transcriptional activity of TFF1.

**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.

**Post-translational modifications**
- Phosphorylated by cyclin A/CDK2. Phosphorylation probably enhances transcriptional activity.
- Glycosylated; contains N-acetylglucosamine, probably O-linked.
- Ubiquitinated. Deubiquitinated by OTUB1.
- Dimethylated by PRMT1 at Arg-260. The methylation may favor cytoplasmic localization.
- Palmitoylated (isoform 3). Not biotinylated (isoform 3).

**Cellular localization**

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**Target**

**Function**
Nuclear hormone receptor. The steroid hormones and their receptors are involved in the regulation of eukaryotic gene expression and affect cellular proliferation and differentiation in target tissues. Can activate the transcriptional activity of TFF1.

**Images**
ab16660 staining Estrogen Receptor alpha in MCF7 cells. The cells were fixed with 4% formaldehyde (10min), permeabilized with 0.1% Triton X-100 for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1h. The cells were then incubated overnight at +4°C with ab16660 at 1/250 dilution (shown in green) and ab195889, Mouse monoclonal [DM1A] to alpha Tubulin (Alexa Fluor® 594), at 2µg/ml (shown in red). Nuclear DNA was labelled with DAPI (shown in blue). Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).
IHC image of ab16660 staining Estrogen Receptor alpha in normal human cervix formalin-fixed paraffin-embedded tissue sections*, performed on a Leica Bond. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH6, epitope retrieval solution 1) for 20 mins. The section was then incubated with ab16660, 1/250 dilution, for 15 mins at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX. No primary antibody was used in the negative control (shown on the inset).

For other IHC staining systems (automated and non-automated) customers should optimize variable parameters such as antigen retrieval conditions, primary antibody concentration and antibody incubation times.

*Tissue obtained from the Human Research Tissue Bank, supported by the NIHR Cambridge Biomedical Research Centre

Western blot - Anti-Estrogen Receptor alpha antibody [SP1] (ab16660)

Anti-Estrogen Receptor alpha antibody [SP1] (ab16660) at 1/25 dilution + lysate prepared from MCF7 cells

**Predicted band size:** 67 kDa
Immunohistochemical analysis of paraformaldehyde-fixed, 0.1% Triton 0.05% Tween permeabilized frozen Mouse Tissue sections (Intestine) stained for Estrogen Receptor alpha (purple) using ab16660 at 1/100 dilution. Primary was incubated for 16 hours at 4°C with serum as blocking agent for 2 hours at 20°C.

Secondary antibody was AffiniPure F(ab')2 Fragment Alexa Fluor® 647-conjugated Donkey anti-rabbit IgG at 1/500 dilution.

HPRT-Cre/ERT2 x mT/mG mouse, treated with tamoxifen.

Formalin-fixed, paraffin-embedded human ovarian adenocarcinoma tissue stained for Estrogen Receptor alpha using ab16660 at 1/200 dilution in immunohistochemical analysis.

Formalin-fixed, paraffin-embedded human breast ductal carcinoma tissue stained for Estrogen Receptor alpha using ab16660 at 1/200 dilution in immunohistochemical analysis.
Formalin-fixed, paraffin-embedded human breast tissue stained for Estrogen Receptor alpha using ab16660 at 1/200 dilution in immunohistochemical analysis.

Formalin-fixed, paraffin-embedded human breast carcinoma tissue stained for Estrogen Receptor alpha using ab16660 at 1/200 dilution in immunohistochemical analysis.

Human breast carcinoma stained with ab16660.

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