Estrogen Receptor alpha Monoclonal Antibody (TE111.5D11)

Catalog Number MA1-12692

Product data sheet

Details

Size 100 µg
Host/Isotope Mouse / IgG1
Class Monoclonal
Type Antibody
Clone TE111.5D11
Immunogen C-terminal fragment (aa 302-595) of human ER expressed in E coli.
Conjugate Unconjugated
Form Liquid
Concentration 1 mg/ml
Purification Protein A/G
Storage buffer PBS
Contains 0.08% sodium azide
Storage Conditions -20° C, Avoid Freeze/Thaw Cycles

Species Reactivity

Tested species reactivity Bovine, Dog, Chicken, Hamster, Human, Mouse, Sheep, Pig, Rabbit, Rat
Published species reactivity Rat, Bovine, Mouse, Human, Chicken

Tested Applications

ChIP assay (ChIP) Assay Dependent
Gel Shift (GS) Assay Dependent
Immunoprecipitation (IP) 2 µg/ml protein lysate
Neutralization (Neu) Assay Dependent
Western Blot (WB) 1-2 µg/ml

Published Applications

ChIP assay (ChIP) See 20 publications below
Miscellaneous PubMed (MISC) See 3 publications below
Immunohistochemistry (IHC) See 6 publications below
Gel Shift (GS) See 4 publications below
Western Blot (WB) See 10 publications below
Immunoprecipitation (IP) See 7 publications below
Immunocytochemistry (ICC) See 2 publications below
Neutralization (Neu) See 1 publications below

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.

Product specific information

A suggested positive control for this product is T47D cells.

Background/Target Information

The estrogen receptor (ER) gene consists of more than 140 kb of genomic DNA divided into 8 exons, being translated into a protein with six functionally discrete domains required for transcription activation function, binding to estrogen response element (ERE) constitutive dimerization, binding to heat shock proteins, and ligand recognition. The ER is an important regulator of growth and differentiation in the mammary gland. Presence of ER in breast tumors indicates an increased likelihood of response to anti-estrogen (e.g. tamoxifen) therapy.

### PubMed References For Estrogen Receptor alpha Monoclonal Antibody (TE11.5D11)

<table>
<thead>
<tr>
<th>Species / Dilution</th>
<th>Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mouse / Not Cited</strong></td>
<td>MA1-12692 was used in ChIP assay and western blot to elucidate how Myb contributes to poor prognosis of colorectal cancer</td>
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<tr>
<td><strong>Mouse / Not Cited</strong></td>
<td>MA1-12692 was used in ChIP assay and western blot to investigate the nuclear function of CEP290</td>
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<tr>
<td><strong>Mouse / Not Cited</strong></td>
<td>MA1-12692 was used in ChIP assay to study the effects of estrogen treatment on histones in the ventromedial hypothalamus and the preoptic area</td>
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<tr>
<td><strong>Mouse / Not Cited</strong></td>
<td>MA1-12692 was used in ChIP assay to study the role of chromatin reorganization in the genomic level interactions between the estrogen and glucocorticoid receptors</td>
</tr>
<tr>
<td><strong>Human / Not Cited</strong></td>
<td>MA1-12692 was used in ChIP assay to study alternative splicing induced by estradiol and the role of ER-Akt interactions</td>
</tr>
<tr>
<td><strong>Human / Not Cited</strong></td>
<td>MA1-12692 was used in ChIP assay to study the transformation of hematopoietic cells and the role of PRC1 inhibition by MLL-ENL</td>
</tr>
<tr>
<td><strong>Mouse / Not Cited</strong></td>
<td>Cell reports (May 2013; 3: 1553) “MLL-ENL inhibits polycomb repressive complex 1 to achieve efficient transformation of hematopoietic cells.” Author(s): Maethner E, Garcia-Cuellar MP, Breitinger C, Takacova S, Divoky V, Hess JL, Slayton RK Pubmed Article URL: <a href="http://dx.doi.org/10.1016/j.celrep.2013.03.038">http://dx.doi.org/10.1016/j.celrep.2013.03.038</a></td>
</tr>
<tr>
<td><strong>Human / Not Cited</strong></td>
<td>MA1-12692 was used in ChIP assay to study DNase I hypersensitivity and chromatin dynamics</td>
</tr>
<tr>
<td><strong>Mouse / Not Cited</strong></td>
<td>MA1-12692 was used in ChIP assay to study the mechanisms by which the Myb transcription factor controls normal hematopoiesis and how it contributes to leukemogenesis</td>
</tr>
<tr>
<td><strong>Mouse / Not Cited</strong></td>
<td>Nucleic acids research (Jun 2011; 39: 4664) “Integrated genome-wide chromatin occupancy and expression analyses identify key myeloid pro-differentiation transcription factors repressed by Myb.” Author(s): Zhao L, Glazov EA, Pattabiraman DR, El-Owaidi F, Zhang P, Brown MA, Leo P, Gonda TJ Pubmed Article URL: <a href="http://dx.doi.org/10.1093/nar/gkr024">http://dx.doi.org/10.1093/nar/gkr024</a></td>
</tr>
</tbody>
</table>
MA1-12692 was used in ChIP assay to investigate the subcellular distribution of phospho-AKT in estrogen receptor alpha-positive breast cancers

Human / Not Cited

The American journal of pathology (May 2010; 176: 2139)
"Subcellular localization of activated AKT in estrogen receptor- and progesterone receptor-expressing breast cancers: potential clinical implications."
PubMed Article URL: http://dx.doi.org/10.2353/ajpath.2010.090477

MA1-12692 was used in ChIP assay to study the mechanism by which EKLF/KLF1 controls cell cycle entry

Mouse / Not Cited

The Journal of biological chemistry (Jul 2009; 284: 20966)
"EKLF/KLF1 controls cell cycle entry via direct regulation of E2F2."
Author(s): Tallack MR, Keys JR, Humbert PO, Perkins AC
PubMed Article URL: http://dx.doi.org/10.1074/jbc.M109.066346

MA1-12692 was used in ChIP assay to study the activation of the estrogen receptor alpha cistrome in breast cancer cells

Human / Not Cited

Molecular and cellular biology (Jun 2009; 29: 3413)
"Coactivator function defines the active estrogen receptor alpha cistrome."
Author(s): Lupien M, Eeckhoute J, Meyer CA, Krum SA, Rhodes DR, Liu XS, Brown M
PubMed Article URL: http://dx.doi.org/10.1128/MCB.00020-09

Human / Not Cited

PloS one (Oct 2008; 3: null)
"Two estrogen response element sequences near the PCNA gene are not responsible for its estrogen-enhanced expression in MCF7 cells."
Author(s): Wang C, Yu J, Kallen CB
PubMed Article URL: http://dx.doi.org/10.1371/journal.pone.0003523

Human / Not Cited

Cancer research (Aug 2007; 67: 7275)
"Interaction of MLL amino terminal sequences with menin is required for transformation."
Author(s): Caslini C, Yang Z, El-Osta M, Milne TA, Slany RK, Hess JL
PubMed Article URL: http://dx.doi.org/10.1158/0008-5472.CAN-06-2369

Human / Not Cited

MA1-12692 was used in ChIP assay to study the role of erythroid Kruppel-like factor in regulating the G1 cyclin dependent kinase inhibitor p18INK4c

Human / Not Cited

Journal of molecular biology (Jun 2007; 369: 313)
"Erythroid Kruppel-like factor regulates the G1 cyclin dependent kinase inhibitor p18INK4c."
Author(s): Tallack MR, Keys JR, Perkins AC
PubMed Article URL: http://dx.doi.org/10.1016/j.jmb.2007.02.109

Human / Not Cited

American journal of physiology. Regulatory, integrative and comparative physiology (Apr 2007; 292: R1465)
"Physiologically high concentrations of 17beta-estradiol enhance NF-kappaB activity in human T cells."
Author(s): Hirano S, Furutama D, Hanafusa T
PubMed Article URL: http://dx.doi.org/10.1152/ajpregu.00778.2006

Human / Not Cited

MA1-12692 was used in ChIP assay to perform a genome-wide analysis of estrogen receptor binding sites

Human / Not Cited

Nature genetics (Nov 2006; 38: 1289)
"Genome-wide analysis of estrogen receptor binding sites."
PubMed Article URL: http://dx.doi.org/10.1038/ng1901
MA1-12692 was used in ChIP assay to study the mechanisms by which leukemogenic MLL proteins induce multiple modifications of histones

Mouse / Not Cited

Cancer research (Dec 2005; 65: 11367)
"Leukemogenic MLL fusion proteins bind across a broad region of the Hox a9 locus, promoting transcription and multiple histone modifications."
Author(s):Milne TA,Martin ME,Brock HW,Slaney RK,Hess JL
PubMed Article URL:http://dx.doi.org/10.1158/0008-5472.CAN-05-1041

MA1-12692 was used in ChIP assay to study the mechanism by which the estrogen receptor-alpha/p300 complex activates the BRCA-1 promoter and the repressive effects of p53

Human / Not Cited

Neoplasia (New York, N.Y.) (Sep 2005; 7: 873)
"An estrogen receptor-alpha/p300 complex activates the BRCA-1 promoter at an AP-1 site that binds Jun/Fos transcription factors: repressive effects of p53 on BRCA-1 transcription."
Author(s):Jeffy BD,Hockings JK,Kemp MQ,Morgan SS,Hager JA,Belakoff J,Whitesell LJ,Bowden GT,Romagnolo DF
PubMed Article URL:http://dx.doi.org/null

MA1-12692 was used in ChIP assay to study the role of the forkhead protein FoxA1 estrogen receptor binding to estrogen-induced genes

Human / Not Cited

Cell (Jul 2005; 122: 33)
"Chromosome-wide mapping of estrogen receptor binding reveals long-range regulation requiring the forkhead protein FoxA1."
PubMed Article URL:http://dx.doi.org/10.1016/j.cell.2005.05.008

MA1-12692 was used in ChIP assay to investigate the regulation of GATA-1 function under different conditions

Mouse / Not Cited

Proceedings of the National Academy of Sciences of the United States of America (Jan 2004; 101: 476)
"Context-dependent regulation of GATA-1 by friend of GATA-1."
Author(s):Letting DL,Chen YY,Rakowski C,Reedy S,Blobel GA
PubMed Article URL:http://dx.doi.org/10.1073/pnas.0306315101

3 Miscellaneous PubMed References

Species / Dilution

Summary

Mouse / Not Cited

Oncogene (May 2016; 35: 2475)
"Intestinal-specific activatable Myb initiates colon tumorigenesis in mice."
PubMed Article URL:http://dx.doi.org/10.1038/onc.2015.305

Chicken / 4 ug/ml

Acta histochemica (Oct 2015; 117: 681)
" Immunohistochemical localization of progesterone receptor isoforms and estrogen receptor alpha in the chicken oviduct magnum during development."
Author(s):González-Morán MG
PubMed Article URL:http://dx.doi.org/10.1016/j.acthis.2015.10.003

Mouse / Not Cited

The Journal of clinical investigation (Sep 2015; 125: 3657)
"DNA replication stress underlies renal phenotypes in CEP290-associated Joubert syndrome."
PubMed Article URL:http://dx.doi.org/10.1172/JCI80657

6 Immunohistochemistry References

Species / Dilution

Summary
MA1-12692 was used in immunohistochemistry to study ER-alpha localization in the growing and regressing ovaries of developing Gallus domesticus chicks.

Biochemical and biophysical research communications (Apr 2014; 447: 197) "Changes in the cellular localization of estrogen receptor alpha in the growing and regressing ovaries of Gallus domesticus during development." Author(s): González-Morán MG PubMed Article URL: http://dx.doi.org/10.1016/j.bbrc.2014.03.122

MA1-12692 was used in immunohistochemistry to study estrogen receptor expression in developing chick embryo central lymphoid tissue and the significance for immune function.


MA1-12692 was used in immunohistochemistry and western blot to generate NSE-MerCreMer transgenic mice with tamoxifen-inducible Cre activity in neurons.

PloS one (May 2012; 7: null) "Generation of NSE-MerCreMer transgenic mice with tamoxifen inducible Cre activity in neurons." Author(s): Kam MK, Lee KY, Tam PK, Lu VC PubMed Article URL: http://dx.doi.org/10.1371/journal.pone.0035799

MA1-12692 was used in immunohistochemistry to study the mechanism by which VEGF restores erectile function in the diabetic rat.


MA1-12692 was used in immunohistochemistry to study the growth factor requirements and basal phenotype of an immortalized mammary epithelial cell line.


MA1-12692 was used in immunohistochemistry to study the expression of different progesterone receptor isoforms in human astrocytomas.

Brain research bulletin (Sep 2001; 56: 43) "Progesterone receptor isoforms expression pattern in human astrocytomas." Author(s): González-Agüero G, Ondarza R, Gamboa-Domínguez A, Cerbón MA, Camacho-Arroyo I PubMed Article URL: http://dx.doi.org/null

4 Gel Shift References

<table>
<thead>
<tr>
<th>Species / Dilution</th>
<th>Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Human / 4 ug/ml</td>
<td>MA1-12692 was used in EMSA to study the expression of different progesterone receptor isoforms in human astrocytomas.</td>
</tr>
</tbody>
</table>


| Human / Not Cited | The Journal of steroid biochemistry and molecular biology (Jun 2010; 120: 172) "The tri-nucleotide spacer sequence between estrogen response element half-sites is conserved and modulates ERalpha-mediated transcriptional responses." Author(s): Shu FJ, Sidell N, Yang D, Kallen CB PubMed Article URL: http://dx.doi.org/10.1016/j.jsbmb.2010.04.009 |


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### 10 Western Blot References

<table>
<thead>
<tr>
<th>Species / Dilution</th>
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<th>Reference</th>
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<tbody>
<tr>
<td>Human / 1:200</td>
<td>MA1-12692 was used in western blot to study the molecular mechanism by which ER-alpha mutations can convert antagonist ligands to agonists.</td>
<td>The Journal of biological chemistry (Jul 2013; 288: 21105) &quot;Estrogen receptor L543A,L544A mutation changes antagonists to agonists, correlating with the ligand binding domain dimerization associated with DNA binding activity.&quot; Author(s):Arao Y.Hamilton KJ,Coons LA,Korach KS PubMed Article URL:<a href="http://dx.doi.org/10.1074/jbc.M113.463455">http://dx.doi.org/10.1074/jbc.M113.463455</a></td>
</tr>
<tr>
<td>Human / Not Cited</td>
<td>MA1-12692 was used in western blot to study the role of the YPEL3 senescence gene in the sensitivity of ER-positive mammary tumor cells to senescence induced by tamoxifen.</td>
<td>International journal of cancer (May 2012; 130: 2291) &quot;Novel senescence associated gene, YPEL3, is repressed by estrogen in ER+ mammary tumor cells and required for tamoxifen-induced cellular senescence.&quot; Author(s):Tuttle R.Miller KR,Maiorano JN,Termuhlen PM,Gao Y,Berberich SJ PubMed Article URL:<a href="http://dx.doi.org/10.1002/ijc.28239">http://dx.doi.org/10.1002/ijc.28239</a></td>
</tr>
<tr>
<td>Human / Not Cited</td>
<td>MA1-12692 was used in western blot to study the differential effects of estrogen and selective estrogen receptor modulators on the actin cytoskeleton of human endometrial cells.</td>
<td>Molecular human reproduction (Oct 2009; 15: 675) &quot;Differential actions of estrogen and SERMs in regulation of the actin cytoskeleton of endometrial cells.&quot; Author(s):Faminiti M,Sanchez AM,Goglia L,Tosi V,Gernazzani AR,Simoncini T PubMed Article URL:<a href="http://dx.doi.org/10.1093/molehr/gap045">http://dx.doi.org/10.1093/molehr/gap045</a></td>
</tr>
<tr>
<td>Rat / 1:300</td>
<td>MA1-12692 was used in western blot to study the mechanism by which 1-alpha, 25-dihydroxyvitamin D3 rapidly inhibits the serum-induced activation of ERK-1 and ERK-2 MAP kinases.</td>
<td>Endocrinology (May 2007; 130: 2291) &quot;Estrogen-induced activation of hypoxia-inducible factor-1alpha, vascular endothelial growth factor expression, and edema in the uterus are mediated by the phosphatidylinositol 3-kinase/Akt pathway.&quot; Author(s):Kazi AA,Koos RD PubMed Article URL:<a href="http://dx.doi.org/10.1210/en.2006-1394">http://dx.doi.org/10.1210/en.2006-1394</a></td>
</tr>
<tr>
<td>Human / Not Cited</td>
<td>MA1-12692 was used in western blot to study the differential estrogen responses of the human and mouse lactoferrin overlapping promoter sequences.</td>
<td>Journal of cellular biochemistry (Oct 2004; 93: 384) &quot;Inhibition of serum-stimulated mitogen activated protein kinase by 1alpha,25(OH)2-vitamin D3 in MCF-7 breast cancer cells.&quot; Author(s):Capiati DA,Rossi AM,Picotto G,Benassati S,Boland RL PubMed Article URL:<a href="http://dx.doi.org/10.1002/jcb.20165">http://dx.doi.org/10.1002/jcb.20165</a></td>
</tr>
<tr>
<td>Human / Not Cited</td>
<td>MA1-12692 was used in western blot to study the roles of CSF-1 and its receptor c-fms in hyperplasia and tumor formation.</td>
<td>Cancer research (Jun 2004; 64: 4162) &quot;Overexpression of the colony-stimulating factor (CSF-1) and/or its receptor c-fms in mammary glands of transgenic mice results in hyperplasia and tumor formation.&quot; Author(s):Kumar N.Luthra R,Joness J,Liu YG,Nair HB,Mandava U,Tekmal RR PubMed Article URL:<a href="http://dx.doi.org/10.1158/0008-5472.CAN-03-2971">http://dx.doi.org/10.1158/0008-5472.CAN-03-2971</a></td>
</tr>
</tbody>
</table>
MA1-12692 was used in western blot to study estrogen receptor alpha-dependent upregulation of progesterone receptor-B expression by estradiol

Human / Not Cited

The Journal of steroid biochemistry and molecular biology (Feb 2004; 88: 131)
"Molecular mechanism of estrogen receptor (ER) alpha-specific, estradiol-dependent expression of the progesterone receptor (PR) B-isoform."
Author(s): Flötotto T, Niederacher D, Hohmann D, Heimerzheim T, Dall P, Djahansouzi S, Bender HG, Hanstein B
PubMed Article URL:http://dx.doi.org/10.1016/j.jsbmb.2003.11.004

MA1-12692 was used in western blot to study the role of aromatase in the biochemical pathways leading to mammary tumorigenesis in transgenic mice

Mouse / Not Cited

Cancer research (Mar 2001; 61: 1910)
"Overexpression of aromatase leads to hyperplasia and changes in the expression of genes involved in apoptosis, cell cycle, growth, and tumor suppressor functions in the mammary glands of transgenic mice."
Author(s): Kirma N, Gill K, Mandava U, Tekmal RR
PubMed Article URL:http://dx.doi.org/null

MA1-12692 was used in western blot to study estrogen receptor variants as therapeutic targets for hormone-independent estrogen receptor-positive breast cancers

Human / Not Cited

Molecular medicine (Cambridge, Mass.) (Jan 2001; 7: 59)
"A therapeutic target for hormone-independent estrogen receptor-positive breast cancers."
Author(s): Biswas DK, Cruz A, Petit N, Mutter GL, Pardee AB
PubMed Article URL:http://dx.doi.org/null

MA1-12692 was used in western blot to study the role of estrogen receptor ligand and estrogen response element sequence in the interaction with COUP-TF

Bovine / Not Cited

The Journal of steroid biochemistry and molecular biology (Nov 1999; 71: 1)
"Role of estrogen receptor ligand and estrogen response element sequence on interaction with chicken ovalbumin upstream promoter transcription factor (COUP-TF)."
Author(s): Klinge CM
PubMed Article URL:http://dx.doi.org/null

7 Immunoprecipitation References

Species / Dilution  Summary

MA1-12692 was used in immunoprecipitation to study the role of GATA4 in regulating estrogen receptor-alpha-mediated osteoblast transcription

Mouse / Not Cited

Molecular endocrinology (Baltimore, Md.) (Jul 2011; 25: 1126)
"GATA4 regulates estrogen receptor-alpha-mediated osteoblast transcription."
Author(s): Miranda-Carboni GA, Guemes M, Bailey S, Anaya E, Corselli M, Peault B, Krum SA
PubMed Article URL:http://dx.doi.org/10.1210/me.2010-0463

MA1-12692 was used in immunoprecipitation to study the role of phosphatidylinositol 3-kinase in estrogen receptor signaling pathways in cortical neurons

Rat / 1:250

The Journal of neuroscience : the official journal of the Society for Neuroscience (Sep 2006; 26: 9439)
"Estrogen receptor protein interaction with phosphatidylinositol 3-kinase leads to activation of phosphorylated Akt and extracellular signal-regulated kinase 1/2 in the same population of cortical neurons: a unified mechanism of estrogen action."
Author(s): Mannella P, Brinton RD
PubMed Article URL:http://dx.doi.org/10.1523/JNEUROSCI.1443-06.2006

MA1-12692 was used in immunoprecipitation and western blot to study the involvement of c-MYC in the regulation of ER alpha-mediated transcriptional networks

Human / 1:30

Molecular cell (Feb 2006; 21: 393)
"Combinatorial analysis of transcription factor partners reveals recruitment of c-MYC to estrogen receptor-alpha responsive promoters."


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### Immunocytchemistry References

<table>
<thead>
<tr>
<th>Species</th>
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</tr>
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<tbody>
<tr>
<td>Human</td>
<td>MA1-12692 was used in immunocytochemistry to investigate the influence of catechol-o-methyltransferase and 2-methoxyestradiol on cytoskeleton structure and steroid receptor signaling</td>
</tr>
<tr>
<td>Mouse</td>
<td>MA1-12692 was used in immunocytochemistry to study a mechanism by which estrogen protects bone by inducing Fas ligand in osteoblasts to regulate osteoclast survival</td>
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</table>

### Neutralization References

<table>
<thead>
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<tbody>
<tr>
<td>Human</td>
<td>MA1-12692 was used in blocking or activating experiment, immunoprecipitation, and western blot to study the role of calmodulin in the formation of the active estrogen receptor complex</td>
</tr>
<tr>
<td>Mouse</td>
<td>MA1-12692 was used in neutralization studies to block or activate the estrogen receptor</td>
</tr>
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