abcam

Product datasheet

Anti-p53 (phospho S392) antibody [EP155Y] ab33889

重组 RabMAb

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概述

产品名称	Anti-p53 (phospho S392)抗体[EP155Y]
描述	兔单克隆抗体[EP155Y] to p53 (phospho S392)
宿主	Rabbit
特异性	This antibody is specific for p53 phosphorylated on Serine 392. The mouse and rat recommendation is based on the WB results. We do not guarantee IHC-P for mouse and rat.
经测试应用	**适用于:** Dot blot, WB, IHC-P, IP **不适用于:** ICC/IF
种属反应性	**与反应:** Mouse, Rat, Human
免疫原	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
阳性对照	WB: HEK293, A431, PC-12, RAW 264.7, HEK-293 and MCF7 cell lysates. IHC-P: Human prostate adenocarcinoma tissue. IP: 293T lysate.
常规说明	This product is a recombinant monoclonal antibody, which offers several advantages including: - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production For more information **see here**. Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**.

性能

形式	Liquid
存放说明	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
存储溶液	pH: 7.20 Preservative: 0.01% Sodium azide Constituents: 59% PBS, 40% Glycerol, 0.05% BSA
纯度	Protein A purified
克隆	单克隆

克隆编号 EP155Y

同种型 IgG

应用

The Abpromise guarantee **Abpromise™承诺保证使用ab33889于以下的经测试应用**

"应用说明"部分 下显示的仅为推荐的起始稀释度;实际最佳的稀释度/浓度应由使用者检定。

应用	Ab评论	说明
Dot blot		1/1000.
WB		1/1000 - 1/5000. Detects a band of approximately 53 kDa (predicted molecular weight: 44 kDa).
IHC-P		1/100 - 1/250. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol. The mouse and rat recommendation is based on the WB results. We do not guarantee IHC-P for mouse and rat.
IP		1/20. **For unpurified use at 1/80.**

应用说明 Is unsuitable for ICC/IF.

靶标

功能 Acts as a tumor suppressor in many tumor types; induces growth arrest or apoptosis depending on the physiological circumstances and cell type. Involved in cell cycle regulation as a trans-activator that acts to negatively regulate cell division by controlling a set of genes required for this process. One of the activated genes is an inhibitor of cyclin-dependent kinases. Apoptosis induction seems to be mediated either by stimulation of BAX and FAS antigen expression, or by repression of Bcl-2 expression. Implicated in Notch signaling cross-over. Isoform 2 enhances the transactivation activity of isoform 1 from some but not all TP53-inducible promoters. Isoform 4 suppresses transactivation activity and impairs growth suppression mediated by isoform 1. Isoform 7 inhibits isoform 1-mediated apoptosis.

组织特异性 Ubiquitous. Isoforms are expressed in a wide range of normal tissues but in a tissue-dependent manner. Isoform 2 is expressed in most normal tissues but is not detected in brain, lung, prostate, muscle, fetal brain, spinal cord and fetal liver. Isoform 3 is expressed in most normal tissues but is not detected in lung, spleen, testis, fetal brain, spinal cord and fetal liver. Isoform 7 is expressed in most normal tissues but is not detected in prostate, uterus, skeletal muscle and breast. Isoform 8 is detected only in colon, bone marrow, testis, fetal brain and intestine. Isoform 9 is expressed in most normal tissues but is not detected in brain, heart, lung, fetal liver, salivary gland, breast or intestine.

疾病相关 Note=TP53 is found in increased amounts in a wide variety of transformed cells. TP53 is frequently mutated or inactivated in about 60% of cancers. TP53 defects are found in Barrett metaplasia a condition in which the normally stratified squamous epithelium of the lower esophagus is replaced by a metaplastic columnar epithelium. The condition develops as a complication in approximately 10% of patients with chronic gastroesophageal reflux disease and

predisposes to the development of esophageal adenocarcinoma.
Defects in TP53 are a cause of esophageal cancer (ESCR) [MIM:133239].
Defects in TP53 are a cause of Li-Fraumeni syndrome (LFS) [MIM:151623]. LFS is an autosomal dominant familial cancer syndrome that in its classic form is defined by the existence of a proband affected by a sarcoma before 45 years with a first degree relative affected by any tumor before 45 years and another first degree relative with any tumor before 45 years or a sarcoma at any age. Other clinical definitions for LFS have been proposed (PubMed:8118819 and PubMed:8718514) and called Li-Fraumeni like syndrome (LFL). In these families affected relatives develop a diverse set of malignancies at unusually early ages. Four types of cancers account for 80% of tumors occurring in TP53 germline mutation carriers: breast cancers, soft tissue and bone sarcomas, brain tumors (astrocytomas) and adrenocortical carcinomas. Less frequent tumors include choroid plexus carcinoma or papilloma before the age of 15, rhabdomyosarcoma before the age of 5, leukemia, Wilms tumor, malignant phyllodes tumor, colorectal and gastric cancers.
Defects in TP53 are involved in head and neck squamous cell carcinomas (HNSCC) [MIM:275355]; also known as squamous cell carcinoma of the head and neck.
Defects in TP53 are a cause of lung cancer (LNCR) [MIM:211980].
Defects in TP53 are a cause of choroid plexus papilloma (CPLPA) [MIM:260500]. Choroid plexus papilloma is a slow-growing benign tumor of the choroid plexus that often invades the leptomeninges. In children it is usually in a lateral ventricle but in adults it is more often in the fourth ventricle. Hydrocephalus is common, either from obstruction or from tumor secretion of cerebrospinal fluid. If it undergoes malignant transformation it is called a choroid plexus carcinoma. Primary choroid plexus tumors are rare and usually occur in early childhood.
Defects in TP53 are a cause of adrenocortical carcinoma (ADCC) [MIM:202300]. ADCC is a rare childhood tumor of the adrenal cortex. It occurs with increased frequency in patients with the Beckwith-Wiedemann syndrome and is a component tumor in Li-Fraumeni syndrome.

序列相似性

Belongs to the p53 family.

结构域

The nuclear export signal acts as a transcriptional repression domain. The TADI and TADII motifs (residues 17 to 25 and 48 to 56) correspond both to 9aaTAD motifs which are transactivation domains present in a large number of yeast and animal transcription factors.

翻译后修饰

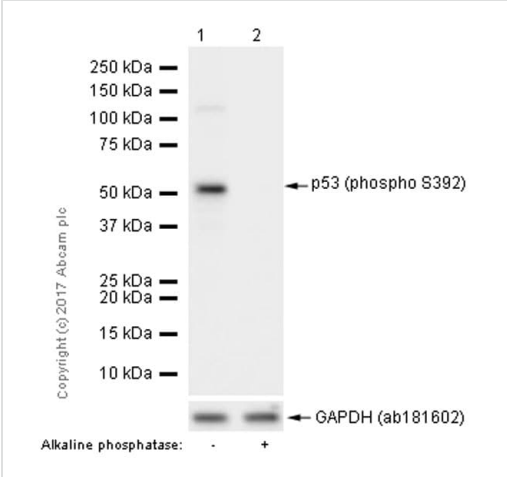
Acetylated. Acetylation of Lys-382 by CREBBP enhances transcriptional activity. Deacetylation of Lys-382 by SIRT1 impairs its ability to induce proapoptotic program and modulate cell senescence.
Phosphorylation on Ser residues mediates transcriptional activation. Phosphorylated by HIPK1 (By similarity). Phosphorylation at Ser-9 by HIPK4 increases repression activity on BIRC5 promoter. Phosphorylated on Thr-18 by VRK1. Phosphorylated on Ser-20 by CHEK2 in response to DNA damage, which prevents ubiquitination by MDM2. Phosphorylated on Thr-55 by TAF1, which promotes MDM2-mediated degradation. Phosphorylated on Ser-46 by HIPK2 upon UV irradiation. Phosphorylation on Ser-46 is required for acetylation by CREBBP. Phosphorylated on Ser-392 following UV but not gamma irradiation. Phosphorylated upon DNA damage, probably by ATM or ATR. Phosphorylated on Ser-15 upon ultraviolet irradiation; which is enhanced by interaction with BANP.
Dephosphorylated by PP2A-PPP2R5C holoenzyme at Thr-55. SV40 small T antigen inhibits the dephosphorylation by the AC form of PP2A.
May be O-glycosylated in the C-terminal basic region. Studied in EB-1 cell line.
Ubiquitinated by MDM2 and SYVN1, which leads to proteasomal degradation. Ubiquitinated by RFWD3, which works in cooperation with MDM2 and may catalyze the formation of short polyubiquitin chains on p53/TP53 that are not targeted to the proteasome. Ubiquitinated by MKRN1 at Lys-291 and Lys-292, which leads to proteasomal degradation. Deubiquitinated by USP10, leading to its stabilization. Ubiquitinated by TRIM24, which leads to proteasomal degradation. Ubiquitination by TOPORS induces degradation. Deubiquitination by USP7, leading to stabilization. Isoform 4 is monoubiquitinated in an MDM2-independent manner.

Monomethylated at Lys-372 by SETD7, leading to stabilization and increased transcriptional activation. Monomethylated at Lys-370 by SMYD2, leading to decreased DNA-binding activity and subsequent transcriptional regulation activity. Lys-372 monomethylation prevents interaction with SMYD2 and subsequent monomethylation at Lys-370. Dimethylated at Lys-373 by EHMT1 and EHMT2. Monomethylated at Lys-382 by SETD8, promoting interaction with L3MBTL1 and leading to repress transcriptional activity. Demethylation of dimethylated Lys-370 by KDM1A prevents interaction with TP53BP1 and represses TP53-mediated transcriptional activation. Sumoylated by SUMO1.

细胞定位

Cytoplasm; Cytoplasm. Nucleus. Nucleus > PML body. Endoplasmic reticulum. Interaction with BANP promotes nuclear localization. Recruited into PML bodies together with CHEK2; Nucleus. Cytoplasm. Localized in both nucleus and cytoplasm in most cells. In some cells, forms foci in the nucleus that are different from nucleoli; Nucleus. Cytoplasm. Localized in the nucleus in most cells but found in the cytoplasm in some cells; Nucleus. Cytoplasm. Localized mainly in the nucleus with minor staining in the cytoplasm; Nucleus. Cytoplasm. Predominantly nuclear but localizes to the cytoplasm when expressed with isoform 4 and Nucleus. Cytoplasm. Predominantly nuclear but translocates to the cytoplasm following cell stress.

图片



Western blot - Anti-p53 (phospho S392) antibody [EP155Y] (ab33889)

All lanes : Anti-p53 (phospho S392) antibody [EP155Y] (ab33889) at 1/1000 dilution (purified)

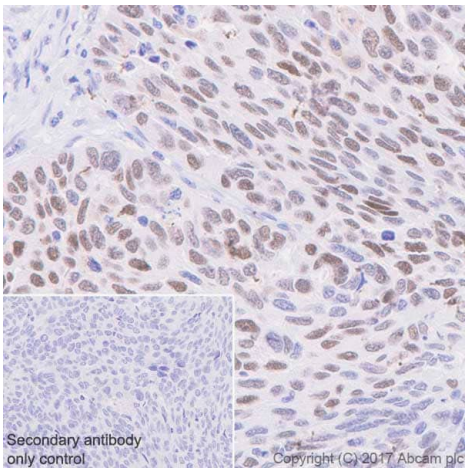
Lane 1 : RAW 264.7 (Mouse Abelson murine leukemia virus-induced tumor macrophage) whole cell lysates
Lane 2 : RAW 264.7 (Mouse Abelson murine leukemia virus-induced tumor macrophage) whole cell lysates, then the membrane was incubated with alkaline phosphatase.

Lysates/proteins at 15 µg per lane.

Secondary
All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/20000 dilution

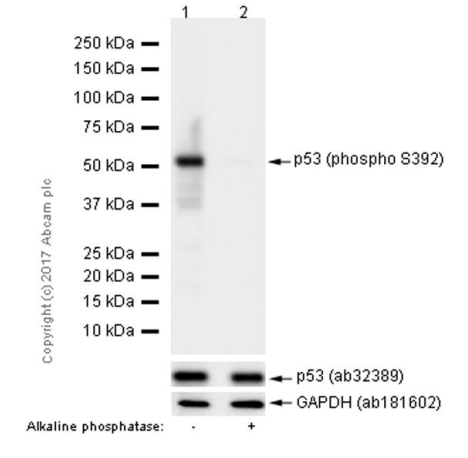
Predicted band size: 44 kDa

Blocking and diluting buffer: 5% NFDM/TBST.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-p53 (phospho S392) antibody [EP155Y] (ab33889)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human lung carcinoma tissue sections labeling p53 with Purified ab33889 at 1:250 dilution. Heat mediated antigen retrieval was performed using **ab93684** (Tris/EDTA buffer, pH 9.0). Tissue was counterstained with Hematoxylin. ImmunoHistoProbe one step HRP Polymer (ready to use) secondary antibody was used at 1:0 dilution. PBS instead of the primary antibody was used as the negative control.



Western blot - Anti-p53 (phospho S392) antibody [EP155Y] (ab33889)

All lanes : Anti-p53 (phospho S392) antibody [EP155Y] (ab33889) at 1/1000 dilution (purified)

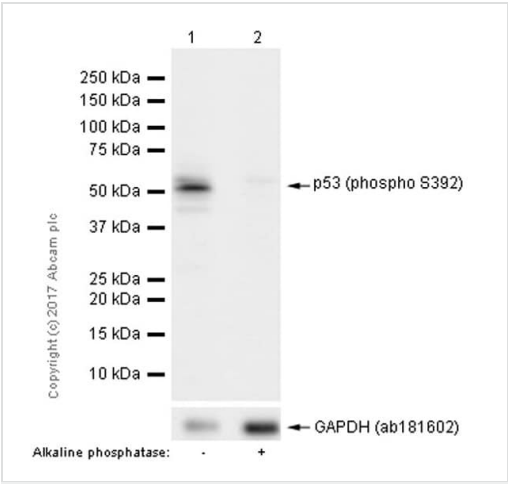
Lane 1 : HEK-293 (Human embryonic kidney epithelial cell) whole cell lysates
Lane 2 : HEK-293 (Human embryonic kidney epithelial cell) whole cell lysates, then the membrane was incubated with alkaline phosphatase.

Lysates/proteins at 15 µg per lane.

Secondary
All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/20000 dilution

Predicted band size: 44 kDa

Blocking and diluting buffer: 5% NFDM/TBST.



Western blot - Anti-p53 (phospho S392) antibody [EP155Y] (ab33889)

All lanes : Anti-p53 (phospho S392) antibody [EP155Y] (ab33889) at 1/1000 dilution (purified)

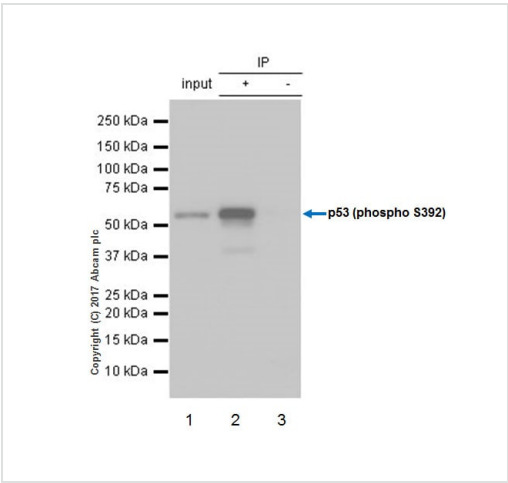
Lane 1 : PC-12 (Rat adrenal gland pheochromocytoma) whole cell lysates
Lane 2 : PC-12 (Rat adrenal gland pheochromocytoma) whole cell lysates, then the membrane was incubated with alkaline phosphatase.

Lysates/proteins at 15 µg per lane.

Secondary
All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/20000 dilution

Predicted band size: 44 kDa
Observed band size: 53 kDa

Blocking and diluting buffer: 5% NFDM/TBST

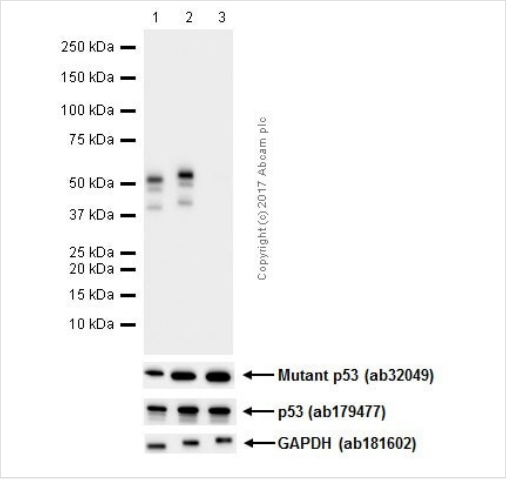


Immunoprecipitation - Anti-p53 (phospho S392) antibody [EP155Y] (ab33889)

ab33889 (purified) at 1:20 dilution (0.6µg) immunoprecipitating p53 in 293T whole cell lysate.

Lane 1 (input): 293T (Human embryonic kidney epithelial cell) whole cell lysate, 10µg
Lane 2 (+): ab33889 & 293T whole cell lysate
Lane 3 (-): Rabbit monoclonal IgG (**ab172730**) instead of ab33889 in 293T whole cell lysate.

For western blotting, VeriBlot for IP Detection Reagent (HRP) (**ab131366**) was used for detection at 1:1000 dilution.
Blocking and diluting buffer: 5% NFDM/TBST.



Western blot - Anti-p53 (phospho S392) antibody [EP155Y] (ab33889)

All lanes : Anti-p53 (phospho S392) antibody [EP155Y] (ab33889) at 1/2000 dilution (purified)

Lane 1 : A431 whole cell lysate
Lane 2 : A431 treated with 1µg/ml doxorubicin for 24 hours whole cell lysate
Lane 3 : A431 treated with 1µg/ml doxorubicin for 24 hours whole cell lysate, the membrane was incubated with alkaline phosphatase

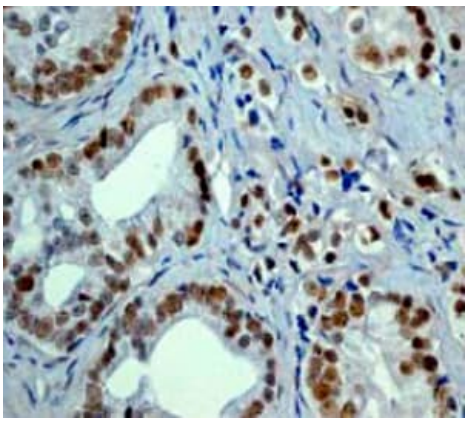
Lysates/proteins at 10 µg per lane.

Secondary
All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/100000 dilution

Predicted band size: 44 kDa
Observed band size: 53 kDa

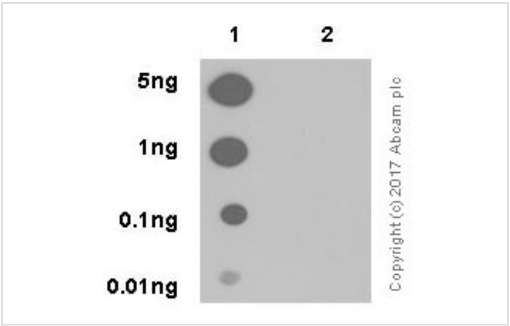
Exposure time: 15 seconds

Blocking and dilution buffer: 5% NFDM/TBST.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-p53 (phospho S392) antibody [EP155Y] (ab33889)

Unpurified ab33889, at a 1/100 dilution, staining p53 in paraffin embedded human prostate adenocarcinoma tissue by Immunohistochemistry.

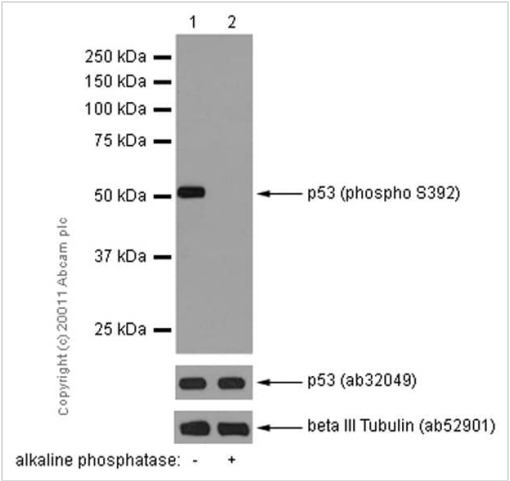


Dot Blot - Anti-p53 (phospho S392) antibody [EP155Y] (ab33889)

Dot blot analysis of p53 (pS392) peptide (Lane 1) and p53 non-phospho peptide (Lane 2) labelling p53 (pS392) with unpurified ab33889 at a dilution of 1/1000. **ab97051** (Peroxidase conjugated goat anti-rabbit IgG (H+L)) was used as the secondary antibody at a dilution of 1/100000.

Blocking and dilution buffer: 5% NFDM/TBST.

Exposure time: 3 minutes.



Western blot - Anti-p53 (phospho S392) antibody [EP155Y] (ab33889)

All lanes : Anti-p53 (phospho S392) antibody [EP155Y] (ab33889) at 1/1000 dilution (unpurified)

Lane 1 : HEK-293 whole cell lysate - untreated
Lane 2 : HEK-293 whole cell lysate - treated with Alkaline Phosphatase

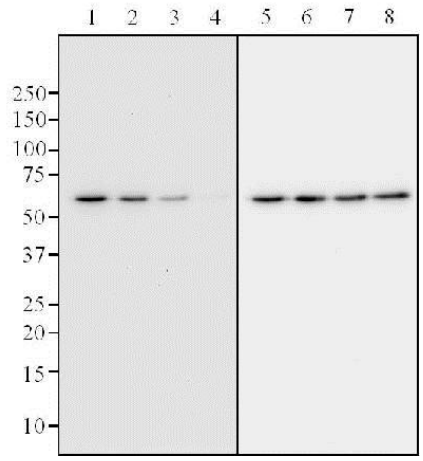
Lysates/proteins at 10 µg per lane.

Secondary
All lanes : Peroxidase-conjugated goat anti-rabbit IgG (H+L) at 1/1000 dilution

Predicted band size: 44 kDa
Observed band size: 53 kDa

Exposure time: 15 seconds

Blocking and dilution buffer: 5% NFDM/TBST.



Western blot - Anti-p53 (phospho S392) antibody [EP155Y] (ab33889)

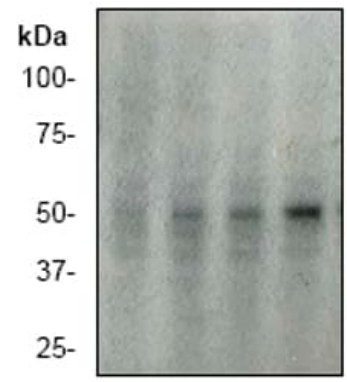
Lanes 1 and 5: Extract of Hek293T incubated with etoposide (7.5 µg).
Lanes 2 and 6: Lambda phosphatase (400 times-diluted)-treated extract of Hek293T incubated with etoposide (7.5 µg).
Lanes 3 and 7: Lambda phosphatase (100 times-diluted)-treated extract of Hek293T incubated with etoposide (7.5 µg).
Lanes 4 and 8: Lambda phosphatase (25 times-diluted)-treated extract of Hek293T incubated with etoposide (7.5 µg).

SDS PAGE performed under reducing conditions (100mM DTT, sample heated at 50°C).

Primary:
Lanes 1-4: Anti p53 (phosphoS392) antibody (ab33889, unpurified) at 1/2000 dilution.
Lanes 5-8: Anti p53 antibody (**ab1101**) at 1/2500 dilution.

Secondary:
Lanes 1-4: HRP-conjugated goat anti-rabbit IgG (H&L) at 1/10000.
Lanes 5-8: HRP-conjugated goat anti-mouse IgG (H&L) at 1/10000.

Blocked in 5% milk in PBS for 3 hours at room temperature.
Incubated with the primary antibody in 5% BSA + 50mM Tris pH 7.5 + 0.05% Tween-20 overnight at 4°C.
Incubated with the secondary antibody in blocking buffer for 2 hours at room temperature.

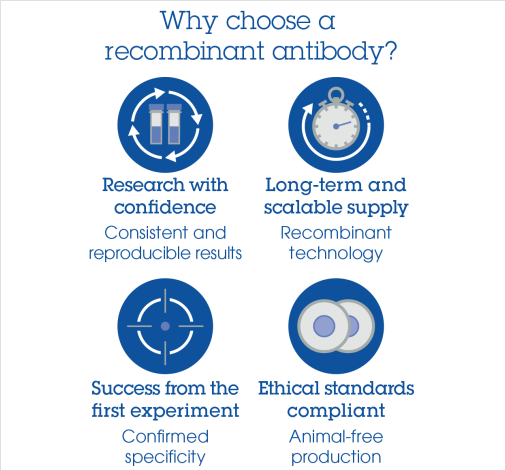


Western blot - Anti-p53 (phospho S392) antibody [EP155Y] (ab33889)

All lanes : Anti-p53 (phospho S392) antibody [EP155Y] (ab33889) at 1/500 dilution (unpurified)

Lane 1 : MCF7 cell lysate untreated.
Lane 2 : MCF7 cell lysate treated with 5 ug/ml Actinomycin for 3hrs.
Lane 3 : MCF7 cell lysate treated with 5 ug/ml Actinomycin for 6hrs.
Lane 4 : MCF7 cell lysate treated with 5 ug/ml Actinomycin for 18hrs.

Predicted band size: 44 kDa
Observed band size: 53 kDa



Anti-p53 (phospho S392) antibody [EP155Y]

(ab33889)

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