Website: thermofisher.com
Customer Service (US): 1 800 955 6288 ext. 1
Technical Support (US): 1 800 955 6288 ext. 441
thermofisher.com/contactus

Performance guaranteed

p53 Monoclonal Antibody (4A8)

Catalog Number MA5-15510

Product data sheet

Details	
Size	100 µL
Host/Isotope	Mouse / IgG1
Class	Monoclonal
Type	Antibody
Clone	4A8
Immunogen	Purified recombinant fragment of human p53 expressed in E. Coli.
Conjugate	Unconjugated
Form	Liquid
Concentration	Conc. Not Determined
Storage buffer	ascites
Contains	0.03% sodium azide
Storage Conditions	Store at 4°C short term. For long term storage, store at -20°C, avoiding freeze/thaw cycles.

Species Reactivity	
Species reactivity	Human

Tested Applications	Dilution *
ELISA (ELISA)	1:10,000
Immunohistochemistry (Paraffin) (IHC (P))	1:200-1:1,000
Western Blot (WB)	1:500-1:2,000
Immunocytochemistry (ICC/IF)	1:100

* 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

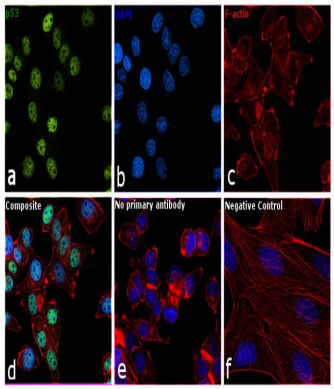
MA5-15510 targets p53 in indirect ELISA, IHC and WB applications and shows reactivity with Human samples. The MA5-15510 immunogen is purified recombinant fragment of human p53 expressed in E. Coli. MA5-15510 detects p53 which has a predicted molecular weight of approximately 43.7kDa.

Background/Target Information

The tumor suppressor protein, p53, is a sequence specific transcription factor that is activated by cellular stress. p53 mediates cell cycle arrest or apoptosis in response to DNA damage or starvation for pyrimidine nucleotides. p53 is up-regulated in response to stress signals and stimulated to activate transcription of specific genes, resulting in expression of p21waf1 and other proteins involved in G1 or G2/M arrest. The structure of p53 comprises an N-terminal transactivation domain, a central DNA-binding domain, an oligomerisation domain, and a C-terminal regulatory domain. There are various phosphorylation sites on p53, of which the phosphorylation at Ser15 is important for p53 activation and stabilization. p53 has been characterized to play a role in blocking the proliferative action of damaged cells and act as an anticancer agent. Phosphorylation of Ser392 in p53 has been shown to associate with the formation of human tumors. In addition, p53 has also been linked to the effects of aging and oxidative stress and an increase in p53 has been linked to deficits in LTP (Long Term Potentiation) in learning and memory. p53 is found in very low levels in normal cells, however, in a variety of transformed cell lines, it is expressed in high amounts, and believed to contribute to transformation and malignancy. Mutants of p53 that frequently occur in a number of different human cancers fail to bind the consensus DNA binding site, and cause the loss of tumor suppressor activity. Alterations of the TP53 gene occur not only as somatic mutations in human malignancies, but also as germline mutations in some cancer-prone families such as Li-Fraumeni syndrome.

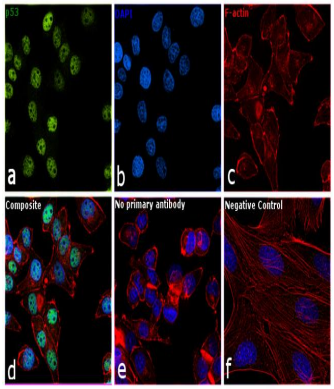
For Research Use Only. Not for use in diagnostic procedures. Not for resale without express authorization.

Product Images For p53 Monoclonal Antibody (4A8)



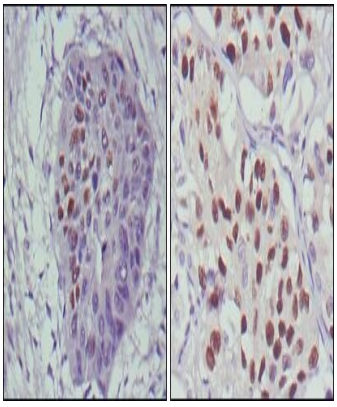
p53 Antibody (MA5-15510)

Antibody specificity was demonstrated by detection of differential basal expression of the target across cell lines owing to their inherent genetic constitution. Expression of p53 was observed in T-47D compared to SKOV-3 using p53 Monoclonal Antibody (4A8) (Product #MA5-15510) in ICC. {RE}



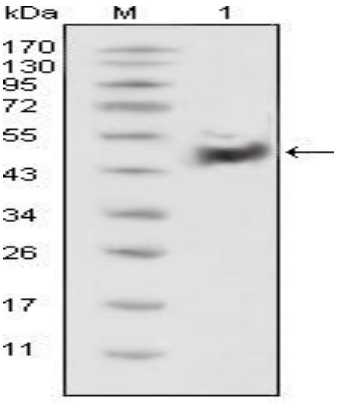
p53 Antibody (MA5-15510) in ICC/IF

Immunofluorescence analysis of p53 was performed using 70% confluent log phase T-47D cells. The cells were fixed with 4% paraformaldehyde for 10 minutes, permeabilized with 0.1% Triton™ X-100 for 10 minutes, and blocked with 1% BSA for 1 hour at room temperature. The cells were labeled with p53 Monoclonal Antibody (Product # MA5-15510) at 1:100 dilution in 0.1% BSA and incubated overnight at 4 degree and then labeled with Goat anti-Mouse IgG (H+L) Superclonal™ Secondary Antibody, Alexa Fluor® 488 conjugate (Product # A28175) at a dilution of 1:2000 for 45 minutes at room temperature (Panel a: green). Nuclei (Panel b: blue) were stained with SlowFade® Gold Antifade Mountant with DAPI (Product # S36938). F-actin (Panel c: red) was stained with Rhodamine Phalloidin (Product # R415, 1:300). Panel d represents the merged image showing nuclear and cytoplasmic localization. Panel e represents control cells with no primary antibody to assess background. Panel f represents SK-OV-3 cells as negative control, showing no p53 staining. The images were captured at 60X magnification.



p53 Antibody (MA5-15510) in IHC (P)

Immunohistochemical analysis of paraffin-embedded human esophageal cancer (left) and lung cancer (right) using p53 monoclonal antibody (Product # MA5-15510) followed with DAB staining.



p53 Antibody (MA5-15510) in WB

Western blot analysis of p53 using p53 monoclonal antibody (Product # MA5-15510) in HEK293 cell lysate (1).

Thermo Fisher Scientific
3747 N. Meridian Road
Rockford, IL 61105 USA

thermofisher.com/contactus