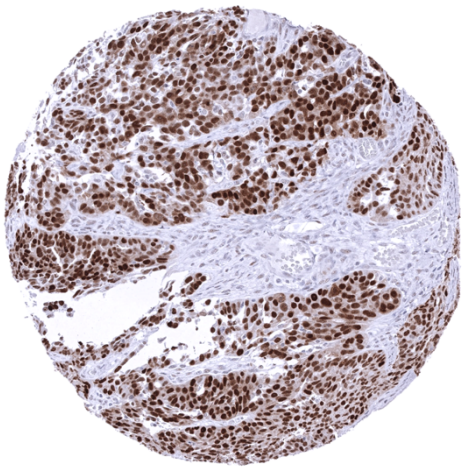
MS Validated Antibodies

MS Validated Antibodies GmbH
Bergstedter Chaussee 62a
22395 Hamburg, Germany
Tel: +49 (0) 40 89 72 55 81
E-Mail:info@ms-validatedantibodies.com
Website: ms-validatedantibodies.com

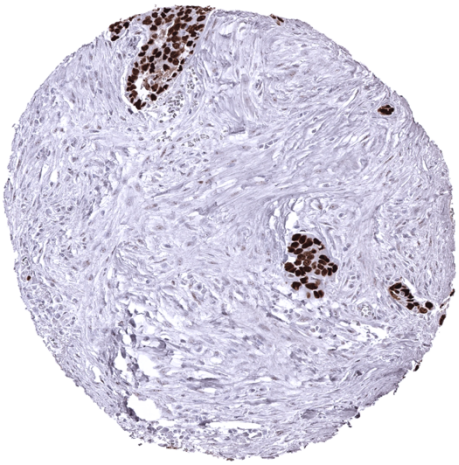
Anti- p53 Antibody
MSVA-053R / Recombinant Rabbit monoclonal

Human SwissProt	P04637
Human Gene Symbol	TP53
Synonyms	Antigen NY-CO-13, BCC7, Cellular Tumor Antigen p53, LFS1, TP53, Transformation Related Protein 53 (TRP53), Tumor Protein p53, Tumor Suppressor p53
Specificity	P53
Immunogen	Recombinant human p53 fragment
Isotype	Rabbit / IgG
Species Reactivity	Human

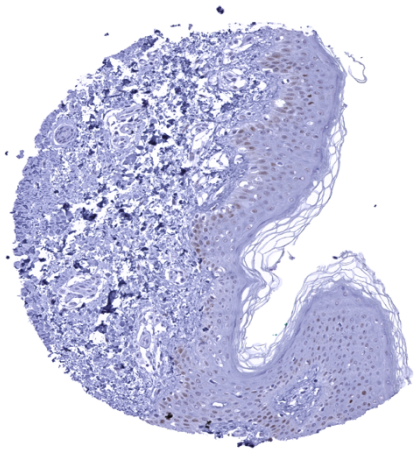
Localization	Intracellular
Storage & Stability	Antibody with azide – store at 2 to 8 C. Antibody without azide – store at -20 to -80 C. Antibody is stable for 24 months. Non-hazardous. No MSD required.
Supplied As	200ug/ml of Ab Purified from Bioreactor Concentrate by Protein A/G. Prepared in 10mM PBS with 0.05% BSA & 0.05% azide. Also available without BSA
Positive Control	Tonsil: More than 20 % of germinal centre B-cells must show a weak to moderate nuclear staining.
Negative Control	Colon: Luminal epithelial cells must remain p53 negative.



Ovarian serous high-grade carcinoma with strong nuclear p53 positivity of tumor cells.



Strong nuclear p53 immunostaining of tumor cells of a muscle-invasive urothelial carcinoma.



Weak nuclear p53 immunostaining of a fraction of basal and suprabasal cells of the skin.

Biology

p53 is a tumor suppressor protein coded by the TP53 gene on 17p13.1. p53 and its homologs are crucial for preventing cancer formation in vertebrates. p53 becomes activated in response to various different cellular stress events, including but not limited to DNA damage, oxidative stress, osmotic shock, ribonucleotide depletion, and deregulated oncogene expression. Activation occurs through a prolonged half-life resulting in nuclear accumulation of the protein and conformational change. In case of DNA damage, p53 activation can induce cell cycle arrest, DNA repair and invoke apoptosis if repair is not feasible. In normal tissues, p53 is expressed in the nuclei of all cells, but usually not immunohistochemically detectable due to a very short half-life (10-20 min.). A weak to moderate p53 staining can, however, be seen in a subset of (mostly proliferative) cells of various epithelial and other cell types. p53 is the most frequently mutated gene in human cancer. More than 50% of all cancers harbor p53 mutations. Various different mutations exert variable effects on the p53 protein including loss of function and gain of function mutations. A large fraction of mutations result in a nuclear accumulation of altered p53 protein which becomes visible by immunohistochemical analysis. Although gain of function mutations can go along with nuclear p53 accumulation, immunohistochemical p53 positivity is generally viewed as a sign of p53 inactivation.

Potential Research Applications

-Despite of decades of research, the exact functions of p53 alterations are still not fully understood. This especially applies for gain of function mutations.
-The role of p53 within multiparametric prognostic tests needs to be established.
-The role of p53 null alterations (complete loss of gene function by inactivating mutations and deletions) is unclear in many tumor entities.

Protocol Suggestions

Dilution: 1:150. pH 7,8 is optimal. Freshly cut sections should be used (more than 10 days between cutting and staining deteriorates staining intensity for most antibodies in IHC).

Limitations

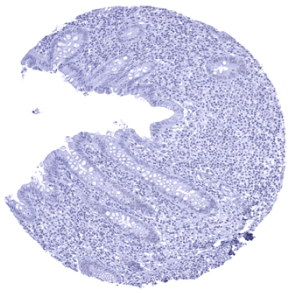
This antibody is available for **research use only** and is not approved for use in diagnostics.

Warranty

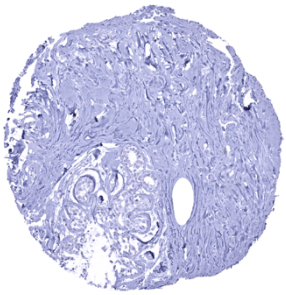
There are no warranties, expressed or implied, which extend beyond this description. MSVA is not liable for any personal injury or economic loss resulting from this product.

MS
Validated Antibodies

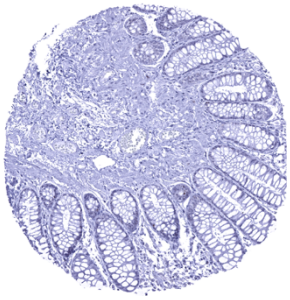
MS Validated Antibodies GmbH
Bergstedter Chaussee 62a
22395 Hamburg, Germany
Tel: +49 (0) 40 89 72 55 81
E-Mail:info@ms-validatedantibodies.com
Website: ms-validatedantibodies.com



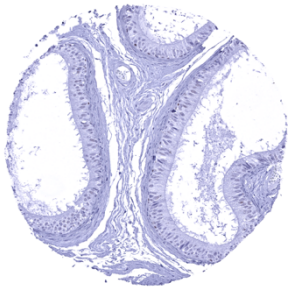
Appendix, mucosa - Weak nuclear p53 positivity of some epithelial cells at the base of crypts



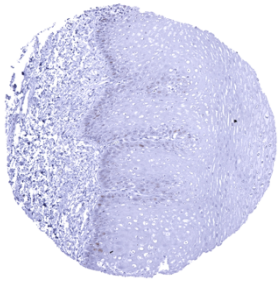
Breast



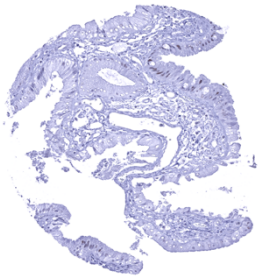
Colon descendens, mucosa - Very faint nuclear p53 positivity of some epithelial cells at the base of crypts



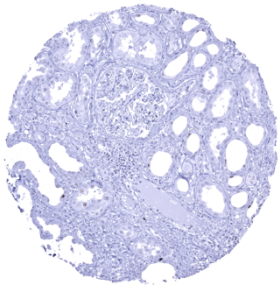
Epididymis - Faint nuclear p53 staining of a fraction of basal epithelial cells



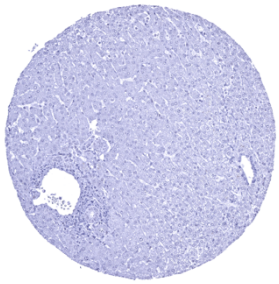
Esophagus, squamous epithelium - Faint nuclear p53 positivity of a subset of basal and suprabasal cells



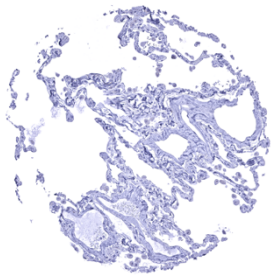
Gallbladder, epithelium - Weak to moderate nuclear p53 positivity of a fraction of epithelial cells



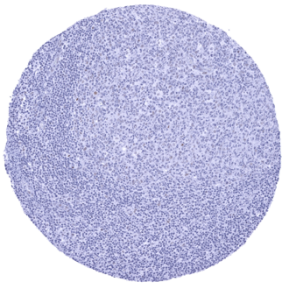
Kidney, cortex - Faint nuclear p53 staining of a small fraction of tubular cells



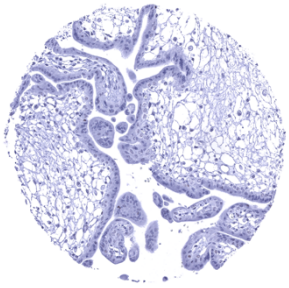
Liver



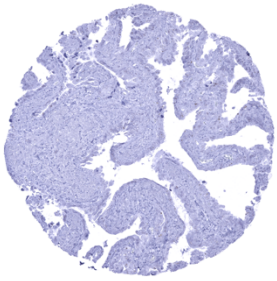
Lung



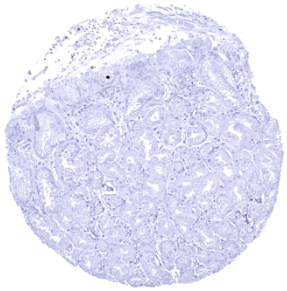
Lymph node - A fraction of lymphocytes from the germinal centre show a faint nuclear p53 staining



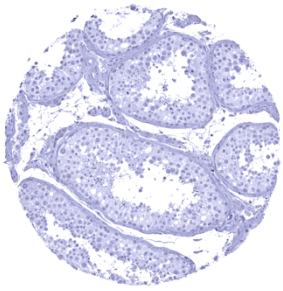
Placenta, early



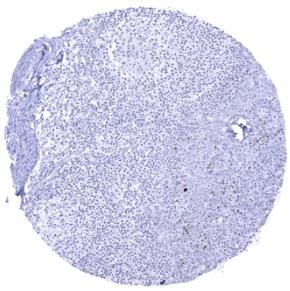
Seminal vesicle



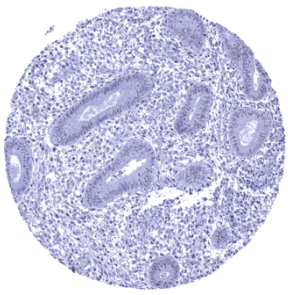
Stomach, antrum



Testis



Tonsil - Weak nuclear p53 staining of a fraction of basal and suprabasal cells of the crypt epithelium. Very faint staining of some germinal centre lymphocytes



Uterus, endometrium (proliferation) - Faint nuclear p53 positivity of a fraction of endometrial cells