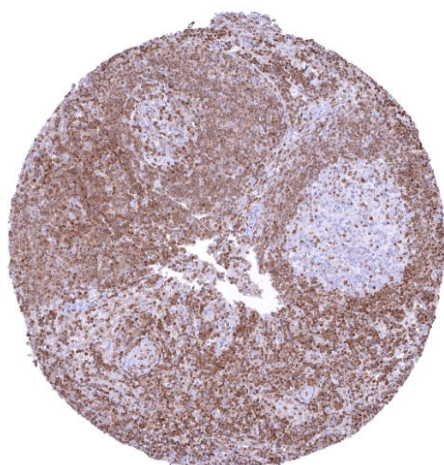


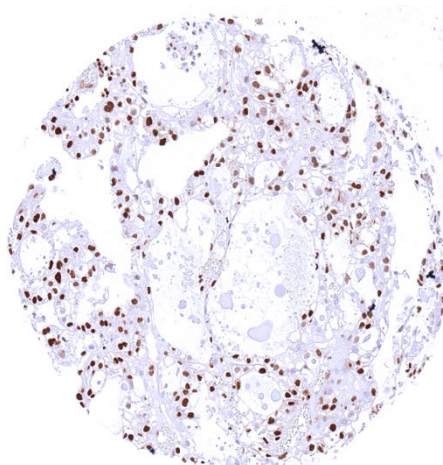
Anti- p27 Kip1 Antibody HMV3970 / Recombinant Rabbit monoclonal

Human SwissProt	P46527
Human Gene Symbol	CDKN1B
Synonyms	cyclin dependent kinase inhibitor 1B , CDKN4 , KIP1 , MEN1B , MEN4 , P27KIP1
Specificity	P27 / KIP1
Immunogen	Recombinant human CDKN1B fragment
Isotype	Rabbit / IgG
Species Reactivity	Human
Localization	Nuclear and cytoplasmic

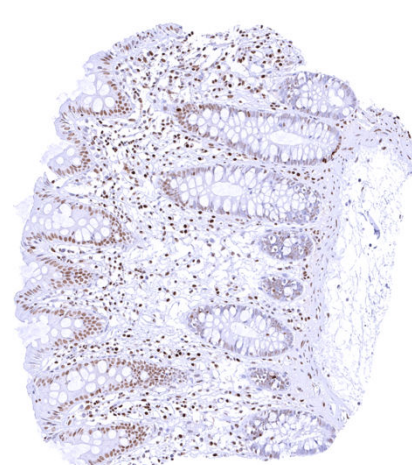
Storage & Stability	Antibody with azide – store at 2 to 8 C. Antibody without azide – store at -20 to -80 C. Antibody is stable for 24 months. Non-hazardous. No MSD required.
Supplied As	Purified antibody from Bioreactor Concentrate by Protein A/G. Prepared in 10mM PBS with <1% BSA & <0.1% azide. Antibody concentrate is optimized for dilution within dilution range using commercially available antibody diluent for IHC.
Positive Control	Tonsil: A strong nuclear p27 staining should be seen in a small subset of germinal centre cells and in a large fraction of interfollicular lymphocytic cells.
Negative Control	Tonsil: p27 staining should be completely absent in most germinal centre cells.



Lymph node with a strong nuclear p27 staining of most interfollicular lymphocytes while most germinal centre cells remain p27 negative.



Ovarian clear cell carcinoma with strong nuclear p27 positivity of tumor cells.



Rectum mucosa with a distinct p27 staining of epithelial cells at the surface but only weak or absent staining in the crypts.

Biology

p27/kip1 is a cyclin dependent kinase (Cdk) inhibitor. Its best known role involves downregulation of cell proliferation through inhibition of cyclin-Cdk complexes by direct binding to both cyclins and Cdks. Several transcription factors are known to activate or repress p27 production. Posttranslational processes which also determine the subcellular localization of p27 may be even more important for the regulation of p27 function than expression alone. Phosphorylation and acetylation of p27 at specific sites can trigger its intranuclear degradation or its export into the cytoplasm. Apart from cell cycle regulation, p27 has a role in the regulation of cytoskeleton reorganization and gene expression [30]. By IHC, p27 staining of at least a subset of nuclei occurs in normal tissues from all organs. p27 is especially abundant in muscle cells, ovarian stroma, lymphocytes, lung and the brain. In various tissues, p27 expression is more prominent in cell types with a low proliferative activity than in those with high rate of cell division. In lymph nodes, for example, germinal centres contain fewer p27 positive cells than the interfollicular space. p27 deregulation such as decreased nuclear levels or cytoplasmic localization plays a role in several disease types including cancer and neurodegeneration. p27 expression - at variable levels - occurs in virtually all cancer types. Reduced expression has been linked to unfavorable tumor features or poor prognosis in many publications.

Potential Research Applications

- The prognostic role of p27 alterations needs to be further investigated in cancer.
- The role of p27 in cytoskeletal dynamics, cell migration, apoptosis, and autophagy needs to be further explored.
- The role of p27 as a transcriptional regulator awaits further exploration.
- The role of p27 in neurodegeneration has not been sufficiently clarified.

Protocol Suggestions

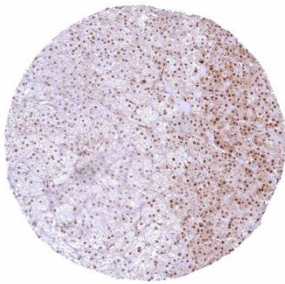
Dilution: 1:100 – 1:200. pH 7,8 is optimal. Freshly cut sections should be used (more than 10 days between cutting and staining deteriorates staining intensity for most antibodies in IHC).

Limitations

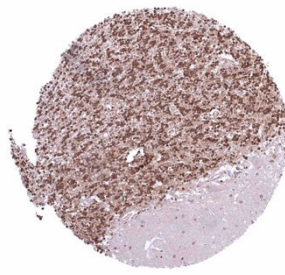
This antibody is available for **research use only** and is not approved for use in diagnostics.

Warranty

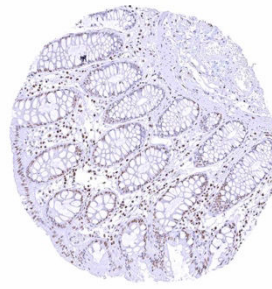
There are no warranties, expressed or implied, which extend beyond this description. MSVA is not liable for any personal injury or economic loss resulting from this product.



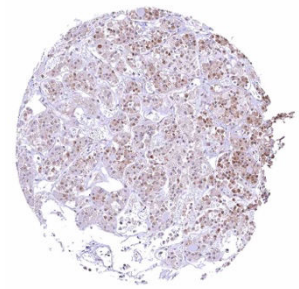
Adrenal gland – Distinct nuclear p27 positivity of a large fraction of cells.



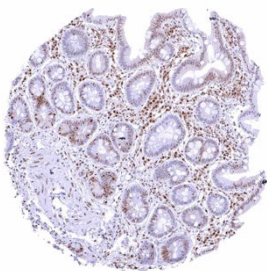
Cerebellum (molecular layer, Purkinje cell layer, granule cell layer) – Strong nuclear p27 positivity of all granular cells while Purkinje cells and most cells of the molecular layer are p27 negative.



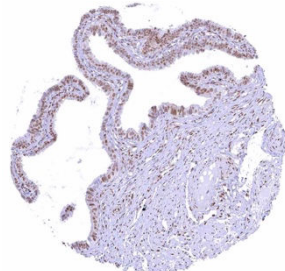
Colon descendens, mucosa



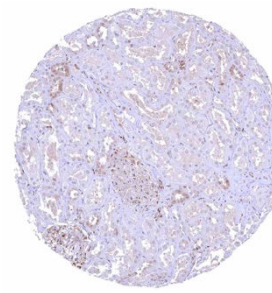
Colon descendens, muscular wall



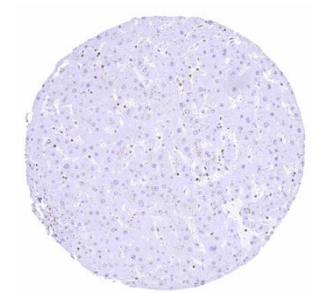
Duodenum, mucosa – Nuclear p27 positivity of a fraction of epithelial cells.



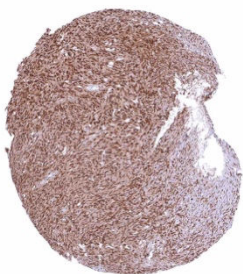
Fallopian tube, mucosa



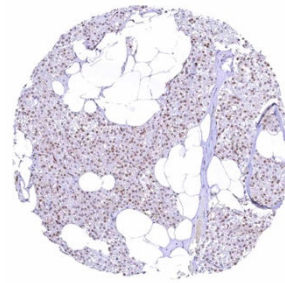
Kidney, cortex – Tubuli are usually p27 negative. The strongest p27 staining occurs in glomeruli and in stroma cells including small vessels.



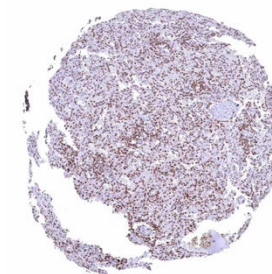
Liver – p27 staining is rare or absent in hepatocytes.



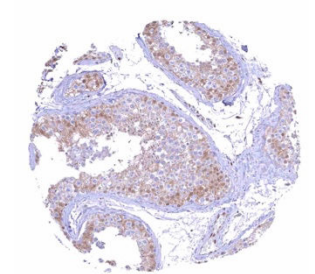
Ovary, stroma – Strong nuclear p27 staining of all stroma cells.



Parathyroid gland – Weak to moderate nuclear p27 positivity of most epithelial cells.



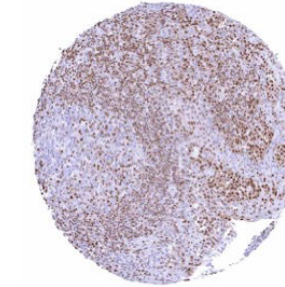
Spleen – Strong nuclear p27 staining of a large fraction of cells.



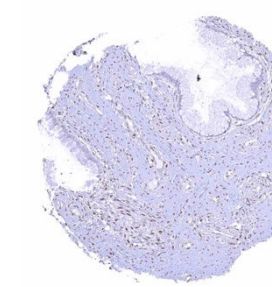
Testis – Weak to moderate nuclear p27 staining of a subset of cells (predominantly Sertoli cells).



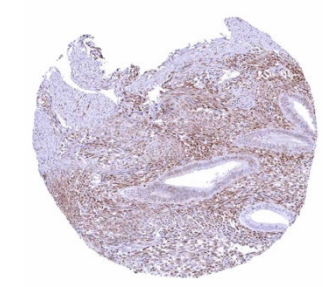
Thymus – Strong nuclear p27 staining of a large fraction of cells.



Tonsil – Strong nuclear p27 staining of a significant subset of cells, especially in the interfollicular area. Nuclear staining of squamous epithelial cells predominates in the more mature cell layers (top 50% of the epidermis)



Uterus, endocervix



Uterus, endometrium (proliferation) – Nuclear p27 staining is weak in endometrium epithelial cells in this sample.