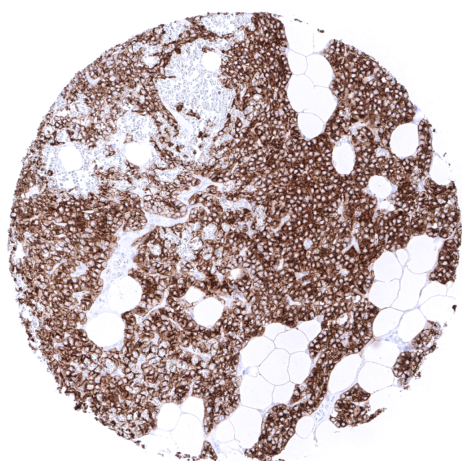


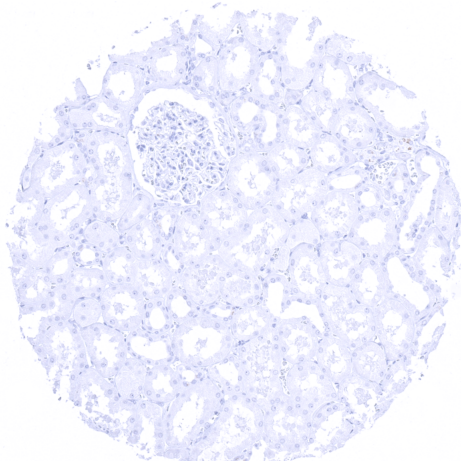
Anti- PTH Antibody MSVA-525R / Recombinant Rabbit monoclonal

Human SwissProt	P01270
Human Gene Symbol	PTH
Synonyms	hPTH; Parathormone; Parathyrin; Parathyroid hormone 1 (PTH1); Parathyroid hormone (PTH)
Specificity	PTH
Immunogen	synthetic peptide of human mature-PTH-polypeptide
Isotype	Rabbit / IgG
Species Reactivity	Human
Localization	Cytoplasmic and Secreted

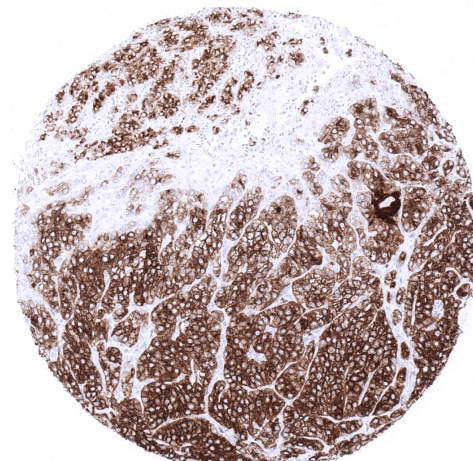
Storage & Stability	Antibody with azide – store at 2 to 8 C. Antibody without azide – store at -20 to -80 C. Antibody is stable for 24 months. Non-hazardous. No MSD required.
Supplied As	200ug/ml of Ab Purified from Bioreactor Concentrate by Protein A/G. Prepared in 10mM PBS with 0.05% BSA & 0.05% azide. Also available without BSA
Positive Control	Normal pituitary gland: A strong PTH immunostaining should be seen in all epithelial cells.
Negative Control	Normal colon or kidney: PTH immunostaining should be absent in all cells.



Strong PTH immunostaining of epithelial cells in the normal parathyroid gland



Absence of PTH immunostaining in normal kidney



Strong PTH immunostaining in a parathyroid adenoma

Biology

Parathyroid hormone (PTH), a 9,5 kDa hormone protein which is coded by the PTH gene at 11p15.3 and produced by the chief cells of the parathyroid glands. It regulates the serum calcium concentration by exerting effects on bone, kidney, and intestine. PTH is secreted in response to low blood serum calcium (Ca²⁺) levels. In order to elevate a low serum calcium level and to release more ionic calcium (Ca²⁺) into the blood to PTH indirectly stimulates osteoclast activity by increasing RANKL expression of osteoblasts. The half-life of PTH is about 4 minutes. Disorders that yield too little or too much PTH, such as hypoparathyroidism, hyperparathyroidism, and paraneoplastic syndromes can cause bone disease, hypocalcaemia, and hypercalcaemia. In the kidney, circulating parathyroid hormone I) increases the reabsorption of filtered calcium ions in the distal tubules and the renal collecting ducts, II) inhibits the reabsorption of phosphate from the tubular fluid, resulting in a decrease in the plasma phosphate concentration, and III) stimulates the conversion of 25-hydroxy vitamin D into the active form of vitamin D (1,25-dihydroxy vitamin D) which stimulates calcium uptake from the intestine. Among normal tissues, PTH expression is only seen in the parathyroid gland. PTH is also expressed in the vast majority of adenomas and carcinomas of the parathyroid gland but largely absent in other tumor entities.

Potential Research Applications

Data on a possible paraneoplastic expression of PTH in cancer are sparse and controversial.

Protocol Suggestions

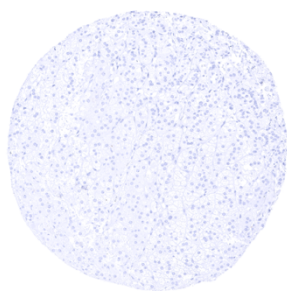
Dilution: 1:150 ; pH9 is optimal. Freshly cut sections should be used (less than 10 days between cutting and staining deteriorates staining intensity for most antibodies in IHC).

Limitations

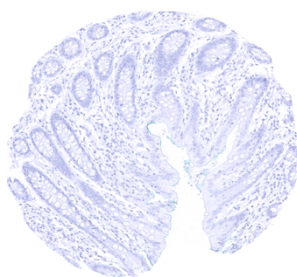
This antibody is available for **research use only** and is not approved for use in diagnostics.

Warranty

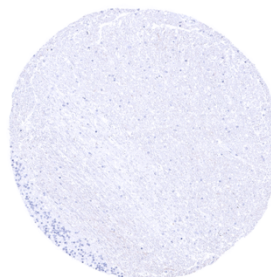
There are no warranties, expressed or implied, which extend beyond this description. MSVA is not liable for any personal injury or economic loss resulting from this product.



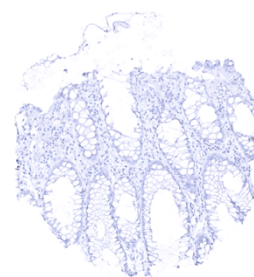
Adrenal gland



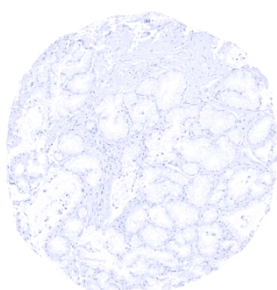
Appendix, mucosa



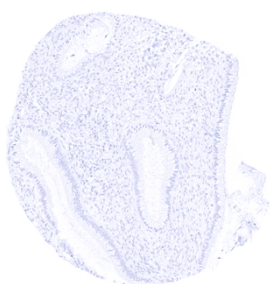
Cerebellum, grey (Stratum neuronorum)



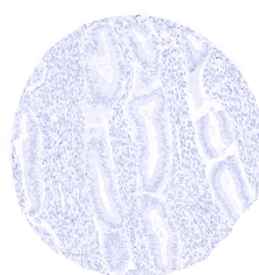
Colon descendens, mucosa



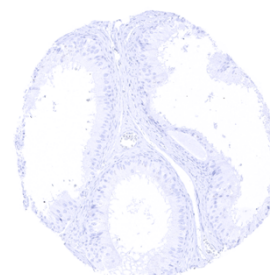
Duodenum, Brunner gland



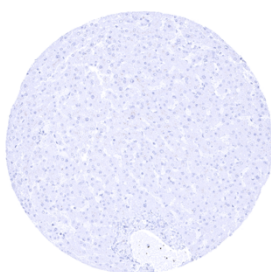
Endocervix



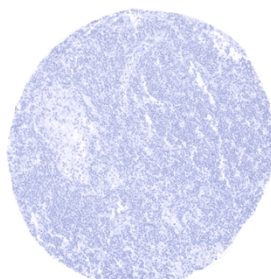
Endometrium, proliferation



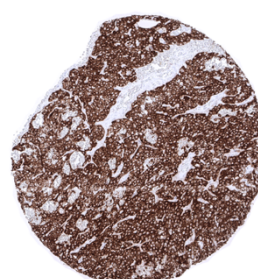
Epididymis



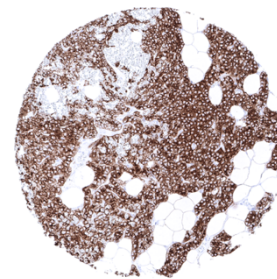
Liver



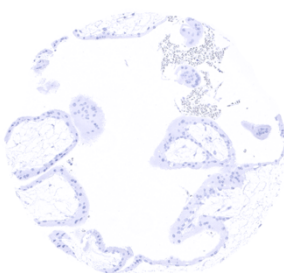
Lymph node



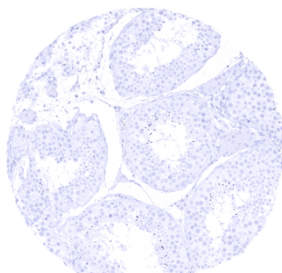
Parathyroid (Parathyroid gland showing intense cytoplasmic PTH immunostaining of all glandular cells.)



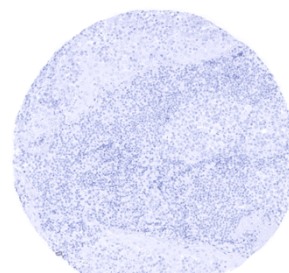
Parathyroid (Strong cytoplasmic PTH immunostaining of all cells of a parathyroid gland.)



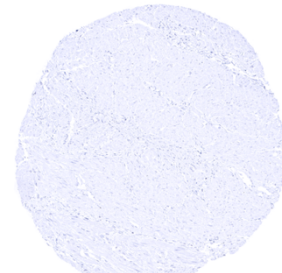
Placenta, early



Testis



Tonsil



Uterus, myometrium