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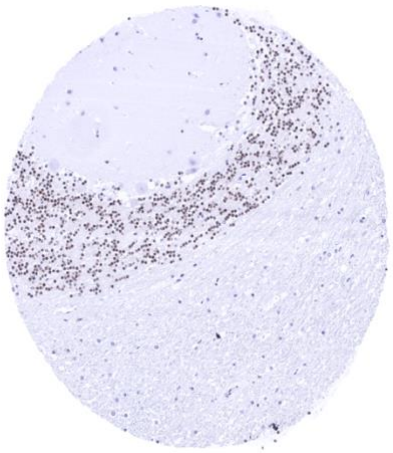
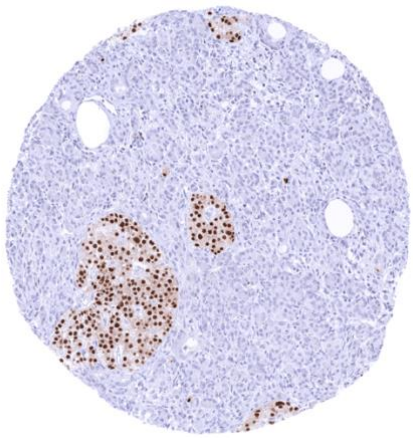
Anti - PAX6 Antibody
MSVA-706M / Mouse monoclonal

Human SwissProt	P26367
Human Gene Symbol	PAX6
Synonyms	AN2; Aniridia type II protein; Oculorhombin; Paired box gene 6 (aniridia keratitis); Paired box homeotic gene 6; Paired box protein Pax-6; Sey; WAGR
Specificity	PAX6
Immunogen	Recombinant human PAX6 fragment
Isotype	Mouse / IgG
Species Reactivity	Human

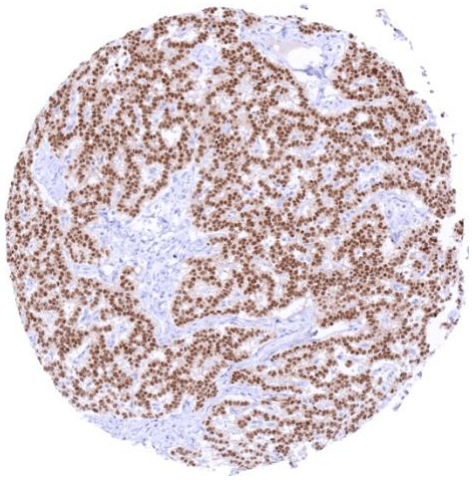
Localization	Nuclear
Storage & Stability	Antibody with azide – store at 2 to 8 C. Antibody without azide – store at -20 to -80 C. Antibody is stable for 24 months. Non-hazardous. No MSD required.
Supplied As	200ug/ml of Ab Purified from Bioreactor Concentrate by Protein A/G. Prepared in 10mM PBS with 0.05% BSA & 0.05% azide. Also available without BSA
Positive Control	Pancreas: A strong PAX6 positivity should be seen in the cells of islets of Langerhans.
Negative Control	Tonsil: PAX6 immunostaining should be absent in all cells.



Cerebellum with nuclear Pax6 staining of granule cells.



Pancreas with intense nuclear Pax6 staining of islet cells.



Pancreatic neuroendocrine tumor with strong, predominantly nuclear Pax6 positivity of all tumor cells.

Biology

PAX6 (paired box protein 6), a 46 KDa transcription factor protein, is a key molecule for neural development. It is involved in the regulation of brain patterning and the balance between cell proliferation and neural differentiation in an appropriate manner to developmental timing. PAX6 also plays a role in the development of the pancreas, pituitary gland, and the testes. The function of the PAX6 protein and the factors that regulate its expression are not well known. Because of its critical role in eye development, the protein has also been termed aniridia type II protein (AN2) or oculorhombin. Heterozygous mutants produce a wide spectrum of ocular defects such as aniridia in humans. Among normal tissues, PAX6 immunostaining can be observed in islet cells of the pancreas, a variable number of neuroendocrine cells in the gastrointestinal epithelium, granule cells of the cerebrum, and in glia cells of the cerebrum. Among tumors, PAX6 positivity is particularly common in gliomas and in neuroendocrine tumors derived from the pancreas and of other organs. Less frequently (and usually at lower level) PAX6 expression can also occur in several other tumor entities.

Potential Research Applications

-The function of PAX6 and its interaction partners are unknown.
-The role of PAX6 in cancer needs to be further investigated.
-The diagnostic utility of PAX6 immunohistochemistry is unclear.

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.

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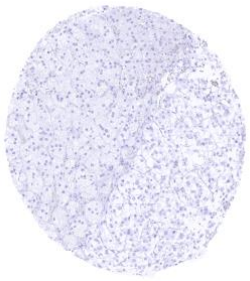
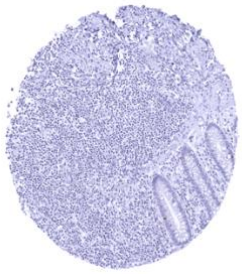
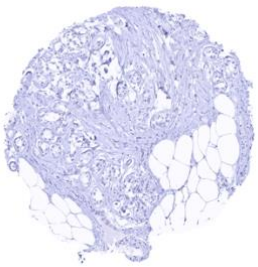


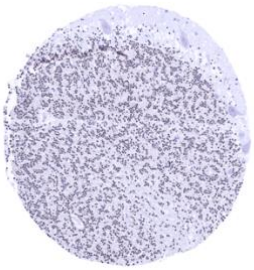
Adrenal gland



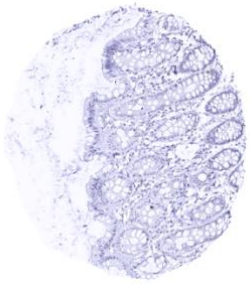
Appendix, mucosa – Nuclear PAX6 staining of few (neuroendocrine) glandular cells



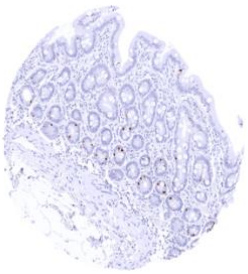
Breast



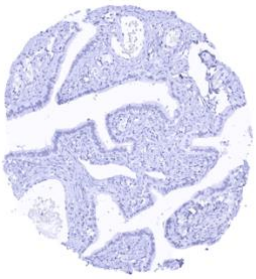
Cerebellum, cortex (molecular layer, Purkinje cell layer, granule cell layer) – Nuclear PAX6staining of granule cells



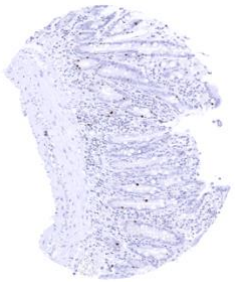
Colon descendens, mucosa



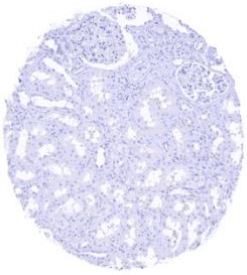
Duodenum, mucosa – Strong nuclear PAX6 staining of few (neuroendocrine) glandular cells



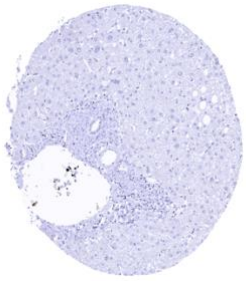
Fallopian tube, mucosa



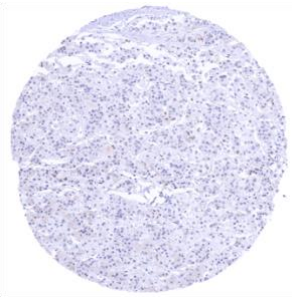
Ileum, mucosa – Significant nuclear PAX6 staining of few (neuroendocrine) glandular cells



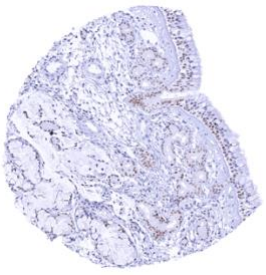
Kidney, cortex



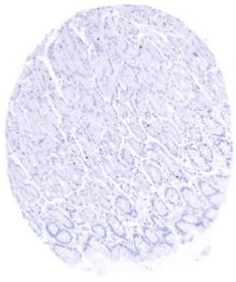
Liver



Pituitary, anterior lobe – Nuclear PAX6 staining of few epithelial cells

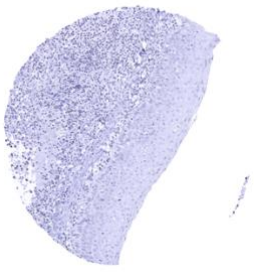


Sinus paranasales – Moderate to strong nuclear PAX6 staining of respiratory epithelial cells and of adjacent glandular cells

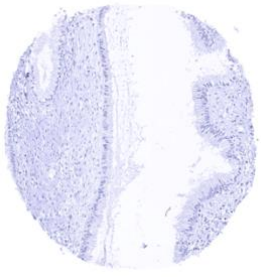


Stomach, antrum – Nuclear PAX6 staining of few (neuroendocrine) glandular cells

Stomach, corpus – Strong nuclear PAX6 staining of few (neuroendocrine) glandular cells



Tonsil, surface epithelium



Uterus, endocervix