MS Validated Antibodies

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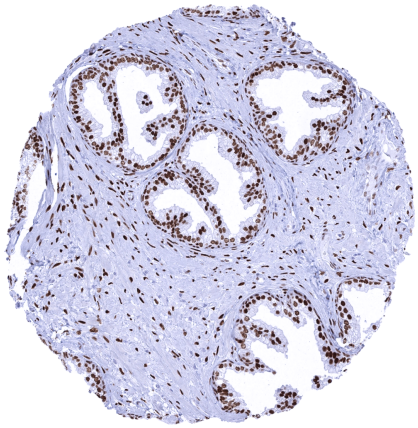
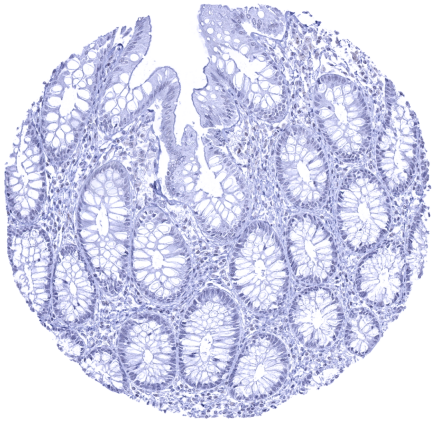
Anti-Androgen Receptor Antibody
MSVA-367R / Recombinant Rabbit monoclonal

Human SwissProt	P10275
Human Gene Symbol	AR
Synonyms	AIS; Dihydrotestosterone receptor (DHTR); HUMARA; HYSP1; Kennedy disease (KD); Nuclear receptor subfamily 3 group C member 4 (NR3C4); SMAX1; Spinal and bulbar muscular atrophy (SBMA); Testicular Feminization (TFM)
Specificity	AR
Immunogen	Recombinant fragment of human AR protein
Isotype	Rabbit / IgG
Species Reactivity	Human

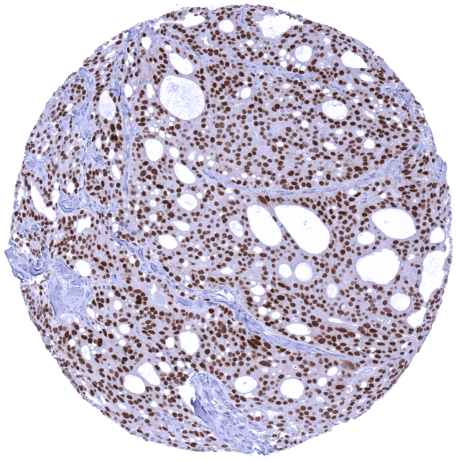
Localization	Nuclear
Storage & Stability	Antibody with azide – store at 2 to 8 C. Antibody without azide – store at -20 to -80 C. A ntibody is stable for 24 months. Non-hazardous. No MSD required.
Supplied As	200ug/ml of Ab Purified from Bioreactor Concentrate by Protein A/G. Prepared in 10mM PBS with 0.05% BSA & 0.05% azide.
Positive Control	Kidney: an at least weak to moderate nuclear AR immunostaining should be seen in a subset of kidney tubuli and of glomerular cells.
Negative Control	Colon: AR immunostaining should be absent in colonic mucosa.



A strong nuclear AR immunostaining is seen in stromal and epithelial cells of the normal prostate.



Complete absence of AR staining in normal colon mucosa.



A strong nuclear AR immunostaining is seen in all cells of a prostatic adenocarcinoma (Gleason 4+4=8).

Biology

The androgen receptor (AR) is a 110 kDa DNA-binding transcription factor protein coded by the ASR gene located at Xq12. Inactive AR is located in the cytoplasm where it is bound to heat shock proteins (HSPs). AR activation by testosterone, dihydrotestosterone, or androgen independent mechanisms results in a relieve of heat shock proteins, phosphorylation, conformational transformation, dimerization and translocation of the protein into the nucleus. The dimerized AR binds to a specific 15 base pair sequence of DNA (androgen response element; ARE) which occurs in numerous AR target genes and initiates transcription of these genes. Androgen receptors do also interact with specific signal transduction proteins in the cytoplasm. Androgen binding to cytoplasmic androgen receptors can thus induce changes in cell function - such as changes in ion transport - independent of changes in gene transcription. AR is an important therapeutic target in prostate cancer. Among normal tissues, AR immunostaining is most significant in organs of the male and female genital systems, the liver, sebaceous glands, squamous epithelium, kidney, breast glands, and skeletal muscle cells but can also be seen in other tissues and cell types. AR immunostaining is found in the vast majority of prostate cancers at the time of the initial diagnosis. AR expression can be lost in prostate cancers during progression or as a consequence of long-term treatment with drugs targeting the AR pathway. A loss of AR expression is, however, not a prerequisite for castration resistant prostate cancer. AR immunostaining is also seen in various other tumor types such as for example breast, kidney, endometrium, ovarian, lung, pancreatic, colorectal, bladder, and liver cancer as well as in neuroendocrine tumors.

Potential Research Applications

- The diagnostic utility of AR immunohistochemistry needs to be evaluated.
- The prognostic and predictive role of androgen receptor expression in breast cancer and other cancers should be evaluated.
- The complex relationship between AR and interaction partners such as JAK1, Aurora A, Src, MAPK2 and ERK1/2 requires further investigation.

Protocol Suggestions

Dilution: 1:150 ; pH 7,8 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. Not for resale without express authorization.

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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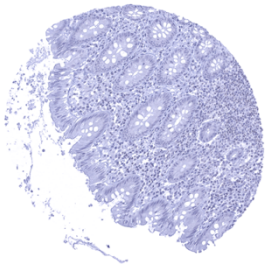
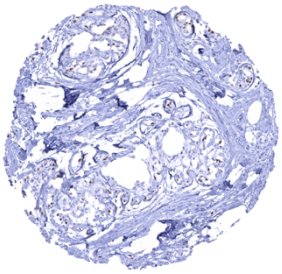
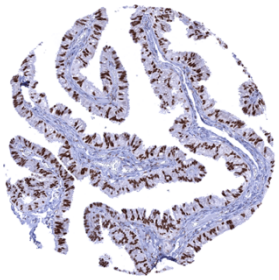


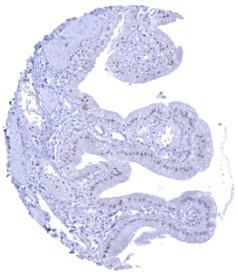
Appendix, mucosa



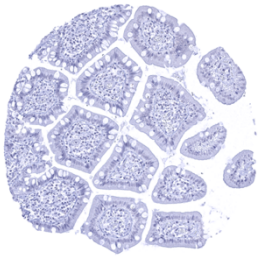
Breast - A weak to moderate nuclear AR immunostaining is seen in some luminal epithelial cells of the breast



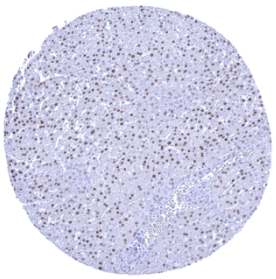
Fallopian tube, mucosa - A strong nuclear AR immunostaining is seen in a fraction of epithelial cells of the fallopian tube (intercalated cells)



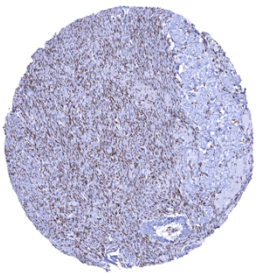
Gallbladder, epithelium - A weak nuclear AR immunostaining is seen in some nuclei of gallbladder epithelium



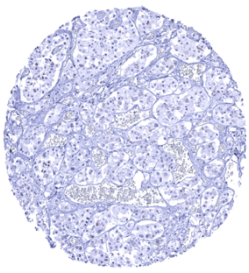
Ileum, mucosa



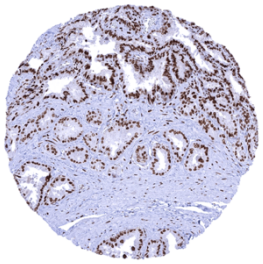
Liver - In the liver, a weak to moderate nuclear AR immunostaining is seen in hepatocytes



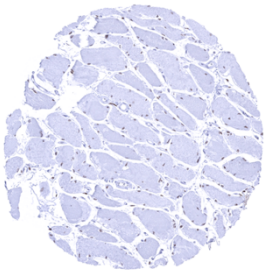
Ovary, stroma - A moderate AR immunostaining is seen in nuclei of the ovarian stroma



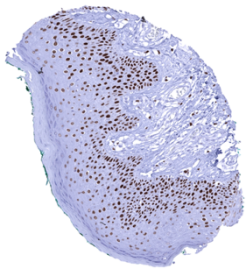
Pituitary gland, anterior lobe



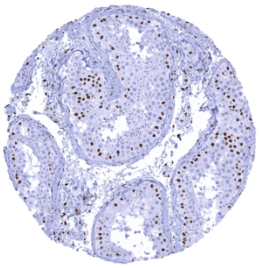
Seminal vesicle - A strong nuclear AR immunostaining is seen in stromal and epithelial cells of the seminal vesicle



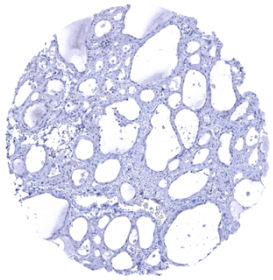
Skeletal muscle - A weak AR immunostaining is seen in nuclei of skeletal muscle cells



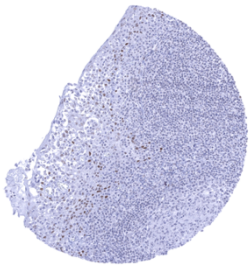
Skin - Epithelial cells of the skin show a moderate to strong nuclear AR immunostaining



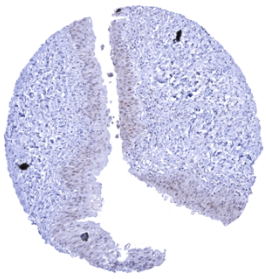
Testis - A moderate to strong nuclear AR immunostaining is seen in Sertoli and Leydig cells of the testis



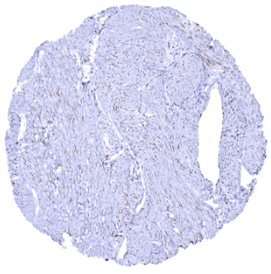
Thyroid gland



Tonsil, surface epithelium - A weak nuclear AR immunostaining is seen in some nuclei of squamous epithelial cells



Urinary bladder, urothelium - A faint AR immunostaining is seen in some nuclei of the urothelium



Uterus, myometrium - A weak AR immunostaining is seen in nuclei of myometrial cells