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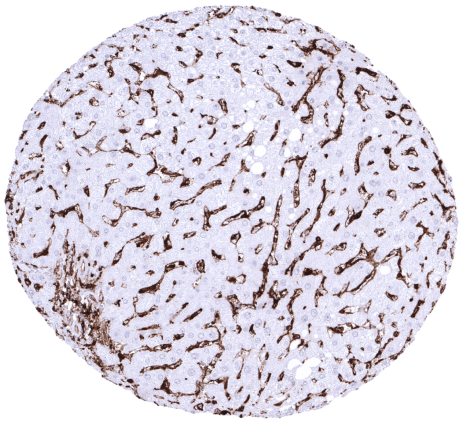
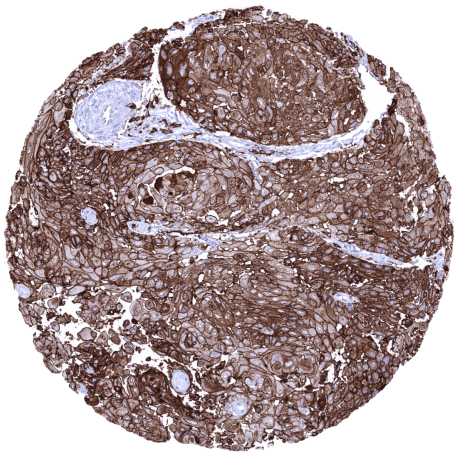
Anti-HLA-DR Antibody
MSVA-470R / Recombinant Rabbit monoclonal

Human SwissProt	P01903
Human Gene Symbol	HLA-DR
Synonyms	DR alpha chain; DRB1; DRB4; HLA class II histocompatibility antigen DR alpha chain; HLA DR1B; HLA DR3B; HLA DRA; HLA-DRA; HLADR4B; HLADRA1; HLADRB; Major histocompatibility complex class II DR alpha; Major histocompatibility complex class II DR beta 1/3/4/5
Specificity	HLA-DR
Immunogen	Recombinant fragment of human HLA-DR protein
Isotype	Rabbit / IgG
Species Reactivity	Human
Localization	Cell surface

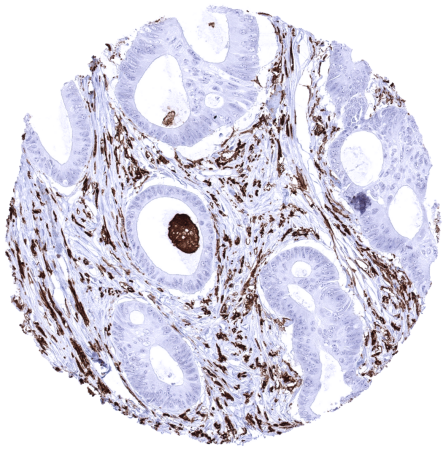
Storage & Stability	Antibody with azide – store at 2 to 8 C. Antibody without azide – store at -20 to -80 C. A ntibody is stable for 24 months. Non-hazardous. No MSD required.
Supplied As	200ug/ml of Ab Purified from Bioreactor Concentrate by Protein A/G. Prepared in 10mM PBS with 0.05% BSA & 0.05% azide.
Positive Control	Liver: An at least moderate staining should be seen of sinusoids and Kupffer cells. Kidney: An at least moderate staining should be seen in glomeruli in small capillaries.
Negative Control	Absence of HLA-DR staining is expected in hepatocytes of a completely normal liver and in tubuli of completely normal kidney.



Sinusoids and Kupffer cells show strong HLA-DR immunostaining in the liver.



Vulva: Squamous cell carcinoma showing strong HLA-DR immunostaining in tumor cells.



Colon: HLA-DR negative colorectal adenocarcinoma showing strong HLA-DR positivity of capillaries and tumor associated inflammatory cells.

Biology

HLA-DR is αβ heterodimer cell surface receptor acting as a ligand for the T-cell receptor (TCR). DR α-chain is encoded by the HLA-DRA locus. The DR β-chain is encoded by 4 different gene loci (DRB1, DRB3, DRB4, DRB5), which are located close together with HLA-DRα gene locus at 6p21.31. The main function of HLA-DR is to present "foreign appearing" peptide antigens to the immune system in order to induce T-(helper)-cell responses that eventually result in the production of antibodies against the same peptide antigen. There is a high level of allelic diversity at HLA DRB1 which affects the spectrum of peptides that can be recognized as "foreign" and the efficiency of their presentation to antigen presenting cells. HLA-DR is expressed in antigen-presenting cells (macrophages, B-cells, and dendritic cells) and can also be found in epithelial cells in case of inflammation or neoplastic transformation. In normal tissues, HLA-DR immunostaining is regularly seen on the majority of inflammatory cells including dendritic cells and macrophages. In these cells the staining is mostly strong but may show variability. A moderate (to strong) HLA-DR staining is also seen of the endothelial lining of blood vessels except in the placenta. HLA-DR staining also occurs in the stomach surface epithelium and the small intestine (strongest staining in the duodenum) and in a subset of the surface epithelial cells of the fallopian tube. Occasional cytoplasmic and membranous HLA-DR staining can focally be seen in virtually all epithelial cell types, especially in case of inflammation, atrophy or regeneration. Among tumors, HLA-DR is regularly expressed in many hematological neoplasms. HLA-DR is also expressed in tumor cells of various cancer types in a fraction of cases.

Potential Research Applications

-HLA-DR expression can occur in a fraction of tumors where it appears to be linked to favorable prognosis. The prognostic role of HLA-DR expression and its predictive significance with respect to checkpoint inhibitor therapies needs to be investigated.
-The role of HLA-DR expressing cells and their spatial relationship to tumor cells is of interest.
-HLA-DR immunostaining can be used to distinguish macrophage subtypes. HLA-DR expression may be lacking in a fraction of M2 macrophages. Monocytes with diminished or absent HLA-DR expression have emerged as important mediators of tumor-induced immunosuppression.

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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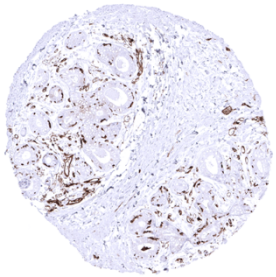
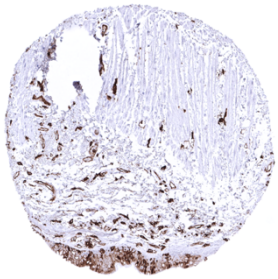
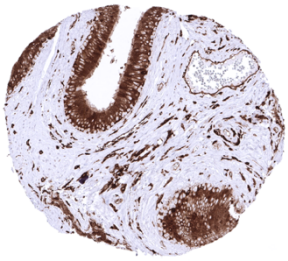


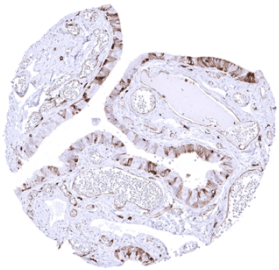
Breast



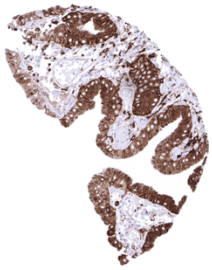
Bronchus, mucosa - Respiratory epithelium can show a cytoplasmic and membranous HLA-DR immunostaining of variable intensity



Epididymis - A strong cytoplasmic and membranous HLA-DR immunostaining can occur in epithelial cells of the epididymis

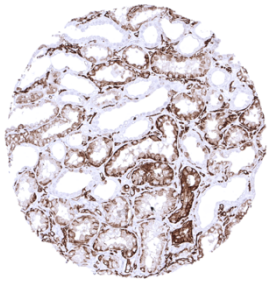


Fallopian tube, mucosa - A strong, predominantly membranous HLA-DR immunostaining is regularly seen in a subset of the surface epithelial cells of the fallopian tube (mosaic staining

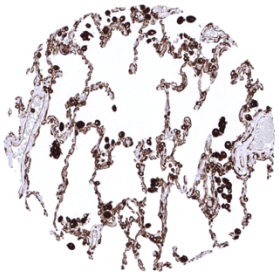


Gallbladder, epithelium - A strong cytoplasmic and membranous HLA-DR staining can occur in the surface epithelium of the gallbladder

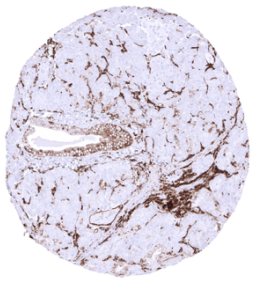
Ileum, mucosa - A membranous and cytoplasmic epithelial cell HLA-DR staining of variable intensity is regularly seen in the ileum



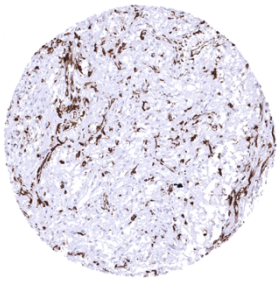
Kidney, cortex - A cytoplasmic and membranous HLA-DR immunostaining can occur in a fraction of tubuli in the kidney



Lung - Intense HLA-DR immunostaining of alveolar macrophages and alveolar capillaries.

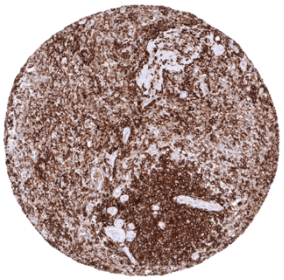


Pancreas - Excretory ducts may show cytoplasmic and membranous HLA-DR staining in the pancreas

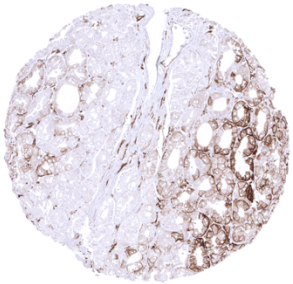


Pituitary gland, posterior lobe

Sinus paranasales - Respiratory epithelium can show a cytoplasmic and membranous HLA-DR immunostaining of variable intensity

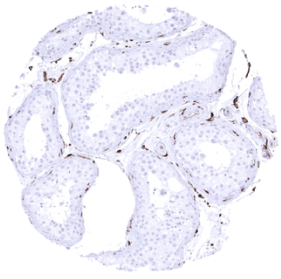


Spleen - A HLA-DR immunostaining is regularly seen on the majority of inflammatory cells including dendritic cells and macrophages

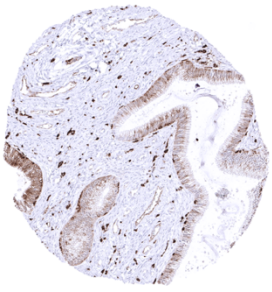


Stomach, antrum - A cytoplasmic and membranous HLA-DR staining is often seen in the surface epithelium of the stomach

Stomach, corpus - A cytoplasmic and membranous HLA-DR staining is often seen in the surface epithelium of the stomach



Testis



Uterus, endocervix - Endocervical epithelium can show a cytoplasmic and membranous HLA-DR immunostaining of variable intensity