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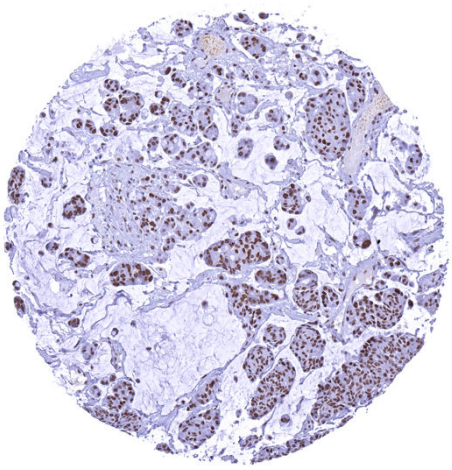
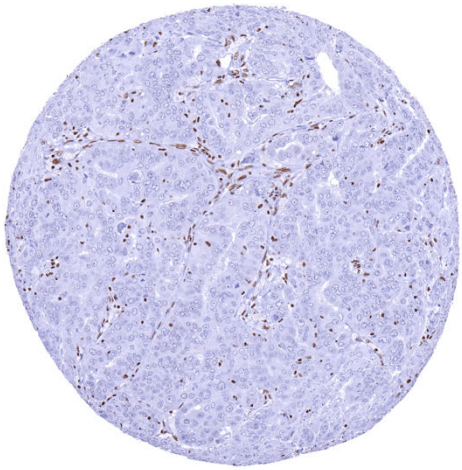
Anti- SMARCA2 Antibody
HMV337 / Recombinant Rabbit monoclonal

Human SwissProt	P51531
Human Gene Symbol	SMARCA2
Synonyms	SWI/SNF related, matrix associated, actin dependent regulator of chromatin, subfamily a, member 2 , BAF190 , BRM , NCBRS , SNF2 , SNF2L2 , SNF2LA , SWI2 , Sth1p , hBRM , hSNF2a
Specificity	SMARCA2
Immunogen	Recombinant human SMARCA2 fragment
Isotype	Rabbit / IgG
Species Reactivity	Human
Localization	Nucleus

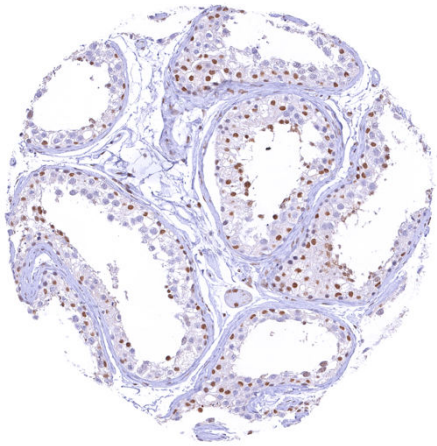
Storage & Stability	Antibody with azide – store at 2 to 8 C. Antibody without azide – store at -20 to -80 C. Antibody is stable for 24 months. Non-hazardous. No MSD required.
Supplied As	Purified antibody from Bioreactor Concentrate by Protein A/G. Prepared in 10mM PBS with <1% BSA & <0.1% azide. Antibody concentrate is optimized for dilution within dilution range using commercially available antibody diluent for IHC.
Positive Control	Colon: All cells should display a moderate to strong SMARCA2 immunostaining although the nuclear staining intensity decreases somewhat from the crypt base to the surface epithelium.
Negative Control	Testis: A subset of intratubular cells (Sertoli cells) must be SMARCA2 negative.



Muscle-invasive urothelial carcinoma with strong SMARCA2 positivity of tumor cells



Serous high-grade ovarian carcinoma with a complete loss of SMARCA2 expression



Testis with a distinct nuclear SMARCA2 staining in all intratubular cells except Sertoli cells

Biology

Along with SMARCA4, SMARCA2 (SWI/SNF-related matrix-associated actin-dependent regulator of chromatin subfamily A member 2) is one of two mutually exclusive, exchangeable DNA-dependent ATPases, which constitute the enzymatic motor of a polymorphic family of SWI/SNF complexes which also include 8–15 further subunits (). SWI/SNF can modify the transcription of genes by altering the chromatin structure surrounding them. Mutations in individual members of the SWI/SNF family together represent one of the most common genetic alterations in cancer, observed in about 20% of cases. According to public databases, mutations of SMARCA2 are rare but SMARCA2 downregulation in cancer can occur due to alternative mechanisms. Targeting SMARCA2 may cause synthetic lethality in SMARCA4 deficient cancers. A nuclear SMARCA2 immunostaining is seen in all normal tissues, and in most cell types. The intensity of nuclear staining is somewhat reduced in superficial cell layers of non-keratinizing squamous epithelium, cytotrophoblast cells of the placenta, epithelial cells of the endometrium, rectal surface epithelial cells, gastric glands, hepatocytes, and in renal tubuli. A complete or almost complete loss of SMARCA2 expression occurs in neural cells of the brain and in Sertoli cells of the testis. Nuclear SMARCA2 expression occurs at various levels in most cancers. A complete loss of SMARCA2 staining can also occur in a small fraction of cancers.

Potential Research Applications

-The functions and interactions of the individual SWI/SNF complex components such as SMARCA2 are not yet fully understood.
-The expression levels of SMARCA2 (absent, reduced, normal, increased) may have a biological/clinical relevance in cancer.
-The ratio of SMARCA2/SMARCA4 expression may be clinically important in cancer.

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.

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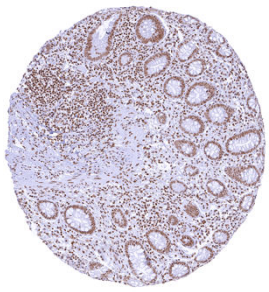
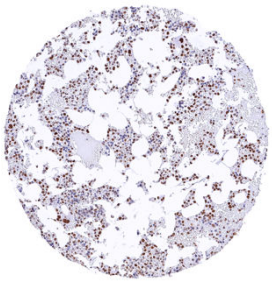
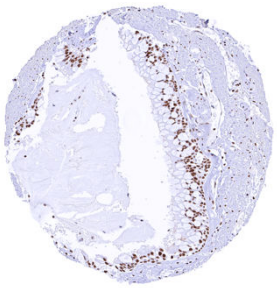


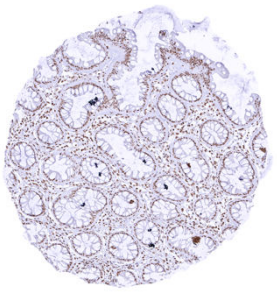
Appendix, mucosa



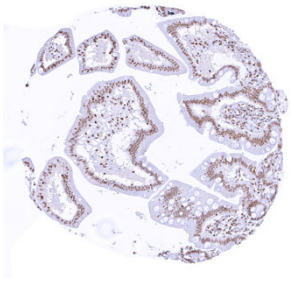
Bone marrow



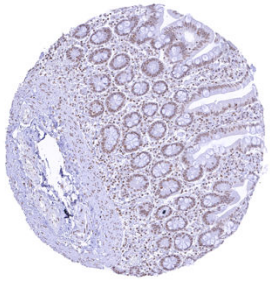
Bronchus, mucosa



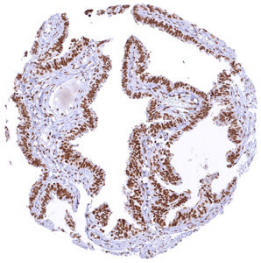
Colon descendens, mucosa



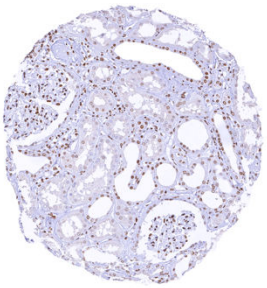
Duodenum, Brunner gland



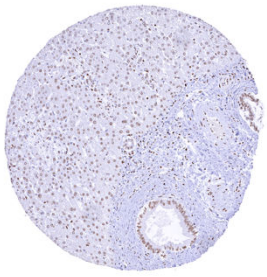
Duodenum, mucosa



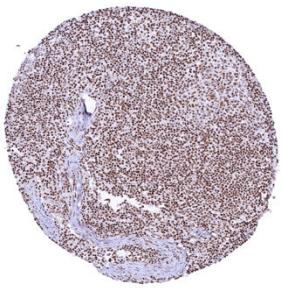
Fallopian tube, mucosa



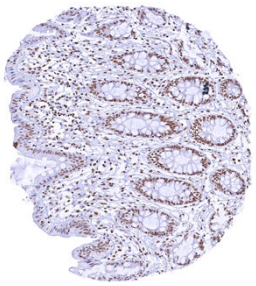
Kidney, cortex – Nuclear SMARCA2 staining of all cells but SMARCA2 staining is clearly lowest in tubuli



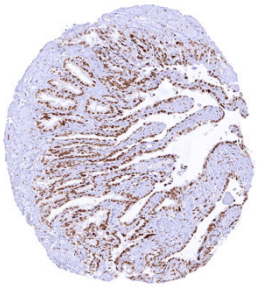
Liver – Nuclear SMARCA2 staining of all cells, but staining is weakest in hepatocytes



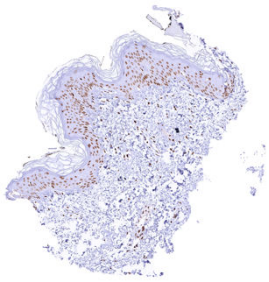
Lymph node



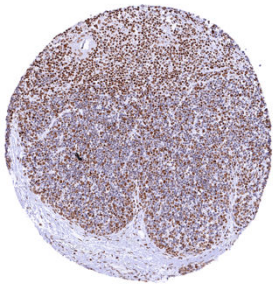
Rectum, mucosa – The staining is somewhat weaker in surface epithelium than in the crypts



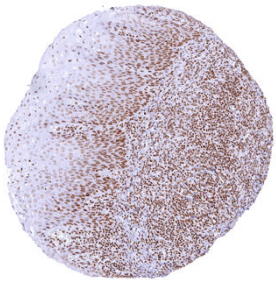
Seminal vesicle



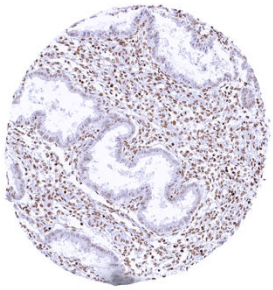
Skin



Thymus



Tonsil, surface epithelium – Nuclear SMARCA2 staining of all cells. The SMARCA2 staining decreases from basal-suprabasal to superficial cell layers in the non-keratinizing squamous epithelium



Uterus, endometrium (secretion)