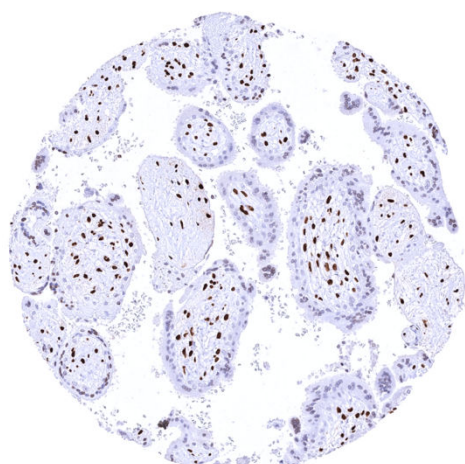


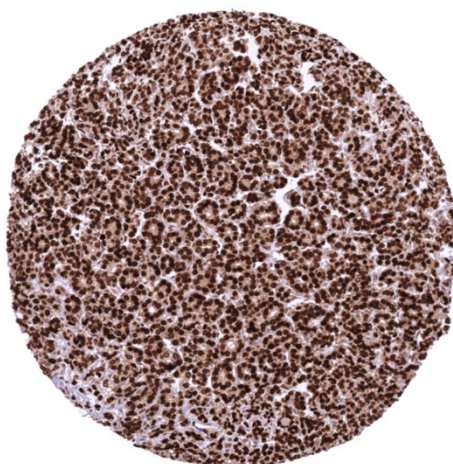
## Anti- HMGA2 Antibody HMOV314 / Recombinant Rabbit monoclonal

Human SwissProt	P52926
Human Gene Symbol	HMGA2
Synonyms	high mobility group AT-hook 2 ,BABL ,HMGI-C ,HMGIC ,LIPO ,STQTL9
Specificity	HMGA2
Immunogen	Recombinant fragment of human HMGA2
Isotype	Rabbit / IgG
Species Reactivity	Human

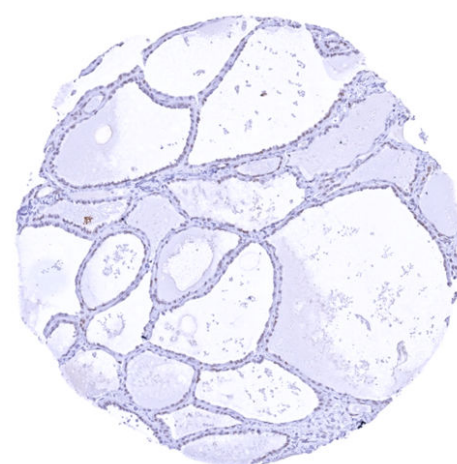
Localization	Intracellular
Storage & Stability	Antibody with azide – store at 2 to 8 C. Antibody without azide – store at -20 to -80 C. Antibody is stable for 24 months. Non-hazardous. No MSD required.
Supplied As	Purified antibody from Bioreactor Concentrate by Protein A/G. Prepared in 10mM PBS with <1% BSA & <0.1% azide. Antibody concentrate is optimized for dilution within dilution range using commercially available antibody diluent for IHC.
Positive Control	Uterus, endocervix: A moderate to strong HMGA2 staining should be seen in epithelial cells of the endocervix.
Negative Control	Skin: HMGA2 staining should be absent in all squamous epithelial cells.



**First trimester placenta with a strong nuclear HMGA2 staining of stroma cells while trophoblast cells remain HMGA2 negative**



**Follicular carcinoma of the thyroid showing a strong nuclear HMGA2 staining of all tumor cells**



**Normal thyroid with a faint nuclear HMGA2 staining of most follicular cells**

### Biology

The high mobility group protein 2 (HMGA2) is a protein of 108 amino acids which can bind to AT-rich binding sites in the DNA minor groove. These bindings affect the conformation of the DNA and modify transcription of numerous genes. HMGA2 is an essential component of the enhanceosome. Instead of direct regulation, HMGA2 alters the architecture of DNA and supports the assembly of protein complexes that do regulate the transcription of genes. HMGA2 is preferentially expressed during organogenesis. HMGA2 appears to be essential for cell growth regulation. HMGA2 mutations can lead to unusually small size in mice. Genome-wide association studies have found a relationship between height of humans and HMGA2-linked SNPs. Among normal tissues, HMGA2 is strongly expressed in amnion cells, stroma cells of the first trimester placenta, a fraction of epithelial cells of the seminal vesicle, epithelial cells of the endocervix and of the fallopian tube as well as in most respiratory epithelial cells. Data suggesting a role of HMGA2 in cancer are rapidly accumulating. HMGA2 is often re-expressed in human tumors, where it promotes tumorigenesis by multiple mechanisms. HMGA2 was found to increase cancer cell proliferation, inhibit apoptosis, impact several DNA repair mechanisms, endorse epithelial-mesenchymal transition, support a cancer stem cell phenotype, and to foster cancer cell resistance to chemotherapeutic agents. Causes for HMGA2 re-expression in neoplastic tissues include gene fusion, amplification, regulation by specific miRNAs, and other mechanisms.

### Potential Research Applications

The diagnostic, prognostic, and predictive relevance of HMGA2 expression in tumors and in preneoplastic disease needs to be investigated.

### Protocol Suggestions

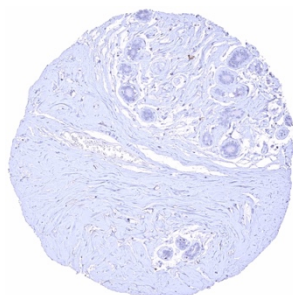
**Dilution: 1:150 – 1:200. pH 7,8 is optimal.** Freshly cut sections should be used (more than 10 days between cutting and staining deteriorates staining intensity for most antibodies in IHC).

### Limitations

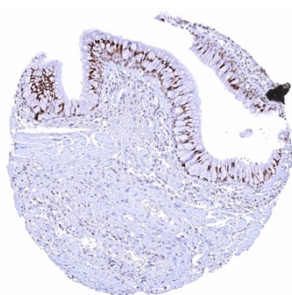
This antibody is available for **research use only** and is not approved for use in diagnostics.

### Warranty

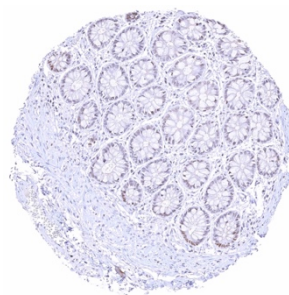
There are no warranties, expressed or implied, which extend beyond this description. MSVA is not liable for any personal injury or economic loss resulting from this product.



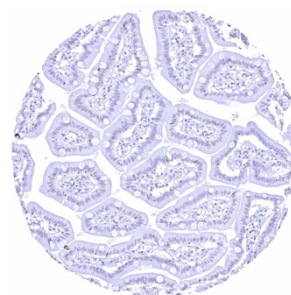
Breast



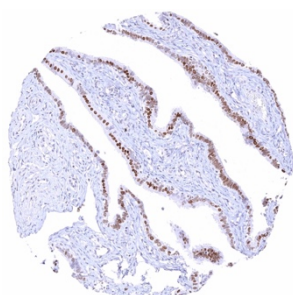
Bronchus, mucosa – Strong nuclear HMGA2 staining of most respiratory epithelial cells



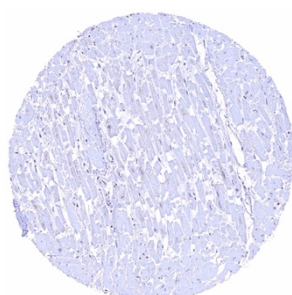
Colon descendens, mucosa – Weak nuclear HMGA2 staining of a fraction of epithelial cells



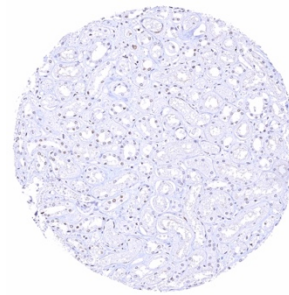
Duodenum, mucosa



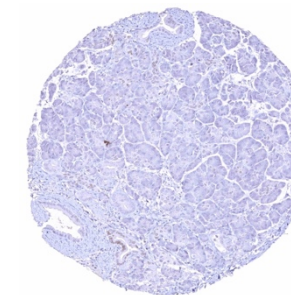
Fallopian tube, mucosa – Strong nuclear HMGA2 staining of most epithelial cells



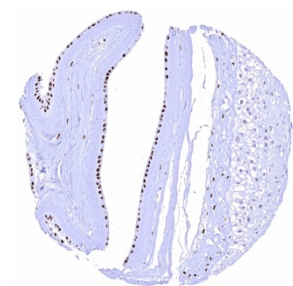
Heart muscle



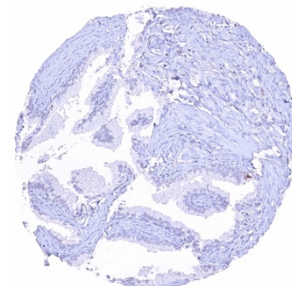
Kidney, medulla – Faint nuclear HMGA2 staining of a fraction of collecting duct cells



Pancreas – Faint nuclear HMGA2 staining of cells from some small ducts



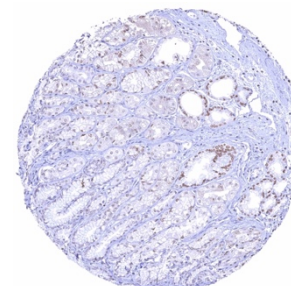
Placenta (amnion and chorion) – Strong nuclear HMGA2 positivity of amnion and stroma cells while chorion cells are negative



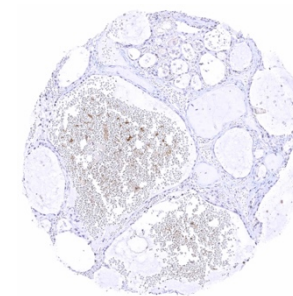
Prostate



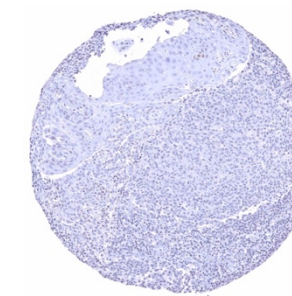
Skeletal muscle



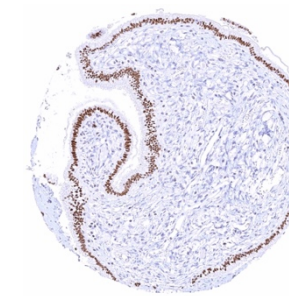
Stomach, antrum – Weak to moderate nuclear HMGA2 positivity of a fraction of glandular cells



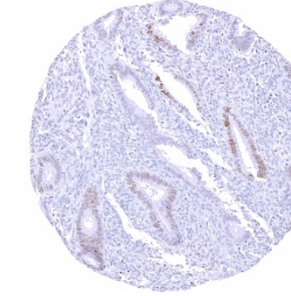
Thyroid gland



Tonsil



Uterus, endocervix – Strong nuclear HMGA2 staining of epithelial cells



Uterus, endometrium (proliferation) – Weak to moderate nuclear HMGA2 staining of a subset of epithelial cells