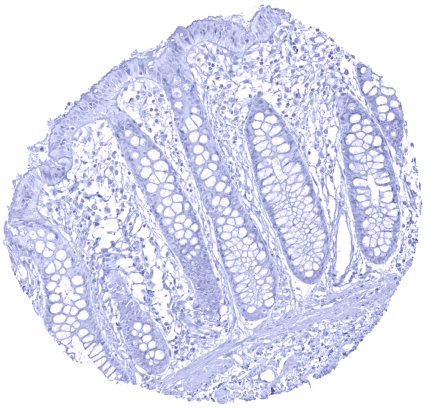
MS Validated Antibodies

MS Validated Antibodies GmbH
Bergstedter Chaussee 62a
22395 Hamburg, Germany
Tel: +49 (0) 40 89 72 55 81
E-Mail:info@ms-validatedantibodies.com
Website: ms-validatedantibodies.com

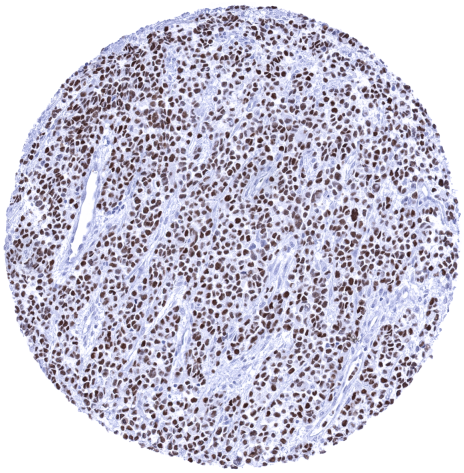
Anti- MyoD1 Antibody
MSVA-801R / Recombinant Rabbit monoclonal

Human SwissProt	P15172
Human Gene Symbol	MYOD1
Synonyms	bHLHc1, Class C basic helix-loop-helix protein 1, Myoblast determination protein 1, Myogenic differentiation 1, Myogenic factor 3 (Myf-3), Myogenin D1, PUM
Specificity	MyoD1
Immunogen	Recombinant fragmen of human MYOD1 1 protein
Isotype	Rabbit / IgG
Species Reactivity	Human
Localization	Nuclear

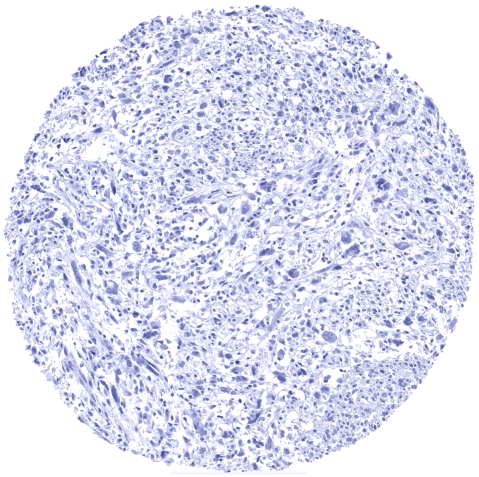
Storage & Stability	Antibody with azide – store at 2 to 8 C. Antibody without azide – store at -20 to -80 C. Antibody is stable for 24 months. Non-hazardous. No MSD required.
Supplied As	200ug/ml of Ab Purified from Bioreactor Concentrate by Protein A/G. Prepared in 10mM PBS with 0.05% BSA & 0.05% azide. Also available without BSA
Positive Control	Rhabdomyosarcoma with previously documented MyoD1 expression should demonstrate a moderate to strong nuclear MyoD1 immunostaining.
Negative Control	Colon or tonsil: MyoD1 immunostaining (nuclear, membranous, and cytoplasmic) should be completely absent in all cell types.



MyoD1 immunostaining is completely absent in rectum mucosa.



Strong MyoD1 positivity of all cells of a rhabdomyosarcoma.



MyoD1 negative Leiomyosarcoma.

Biology

Myoblast determination protein 1 (MyoD1) is coded by a gene on 11p15.1. MyoD belongs to a protein family of myogenic regulatory factors (MRFs) also including Myf5, myogenin, and MRF4 (Myf6). MyoD1 is one of the earliest markers of myogenic commitment. MyoD1 plays an important role in the regulation of muscle differentiation. Its expression commits mesoderm cells to a skeletal myoblast lineage. MyoD1 is normally expressed in muscle stem cells (myosatellite cells) at extremely low (undetectable) levels, but expression of MyoD1 is activated in response to exercise or muscle tissue damage. MyoD1 cooperates with the tumor suppressor gene, Retinoblastoma (pRb) to induce cause cell cycle arrest in terminally differentiated myoblasts. Due to functional redundancy with Myf5 and/or Mrf4, muscle development is not markedly ablated in mouse mutants lacking the MyoD1 gene. Among normal adult tissues nuclear MyoD1 immunostaining is not observed. Nuclear staining can only be seen in normal fetal muscle. Among tumors, a positive INHA immunostaining is seen in most cases of rhabdomyosarcoma. Rarely, a positive MYOD1 staining can also occur in various other tumor entities such as for example some mesenchymal chondrosarcomas or sarcomatoid carcinomas.

Potential Research Applications

-The clinical significance of MyoD1 expression levels in rhabdomyosarcomas needs to be investigated.
-The prevalence (and possible clinical significance) of aberrant MyoD1 staining in non-myogenic tumors has not been systematically evaluated.

Protocol Suggestions

Dilution: 1:100 ; 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

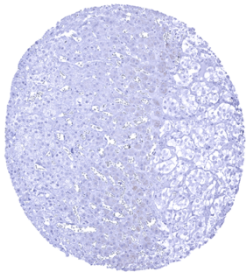
This antibody is available for **research use only** and is not approved for use in diagnostics.

Warranty

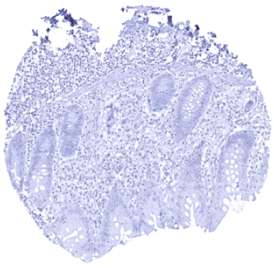
There are no warranties, expressed or implied, which extend beyond this description. MSVA is not liable for any personal injury or economic loss resulting from this product.

MS
Validated Antibodies

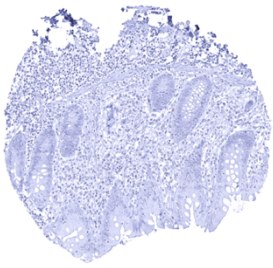
MS Validated Antibodies GmbH
Bergstedter Chaussee 62a
22395 Hamburg, Germany
Tel: +49 (0) 40 89 72 55 81
E-Mail:info@ms-validatedantibodies.com
Website: ms-validatedantibodies.com



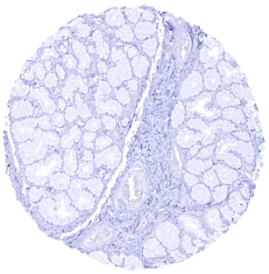
Adrenal gland



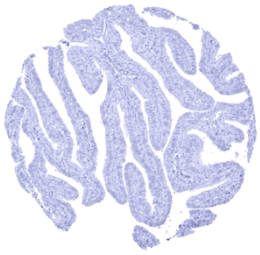
Appendix, mucosa



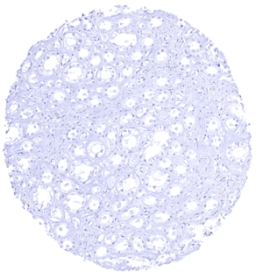
Cerebellum (molecular layer, Purkinje cell layer, granule cell layer, white matter)



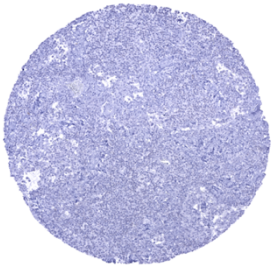
Duodenum, Brunner gland



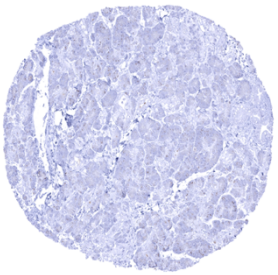
Fallopian tube, mucosa



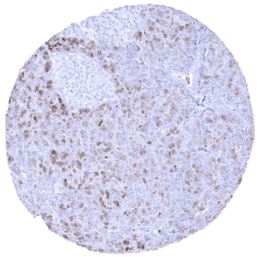
Kidney, medulla



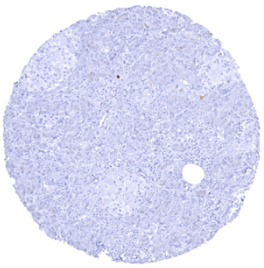
Lymph node



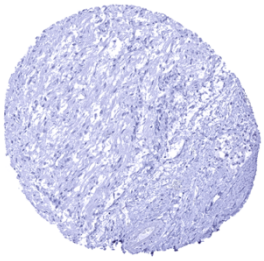
Pancreas - In the pancreas, a variable granular MyoD1 staining can be seen. This represents a (tolerable) antibody cross-reactivity



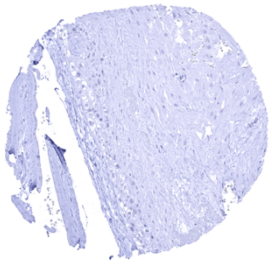
Pancreas - In the pancreas, a variable granular MyoD1 staining can be seen. This represents a (tolerable) antibody cross-reactivity



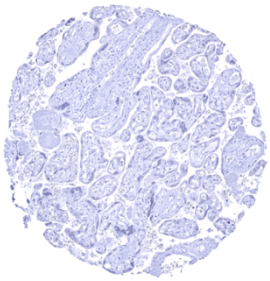
Pancreas - In the pancreas, a variable granular MyoD1 staining can be seen. This represents a (tolerable) antibody cross-reactivity



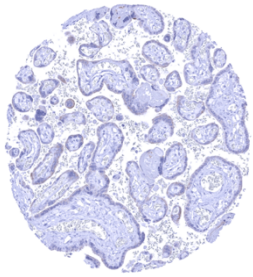
Pituitary gland, posterior lobe



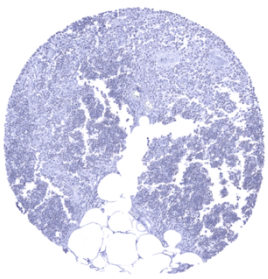
Placenta (amnion and chorion)



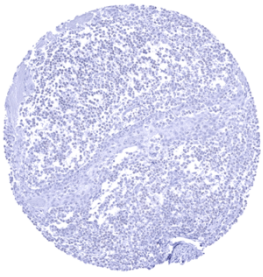
Placenta, mature - Membranous MyoD1 staining of the surface membrane of the syncytiotrophoblast (an antibody-cross-reactivity sometimes found in placenta tissue) is not seen in this sample



Placenta, mature - In the placenta, a weak membranous MyoD1 staining of the surface membrane of the syncytiotrophoblast can be seen. This represents a (tolerable) antibody cross-reactivity



Thymus



Tonsil