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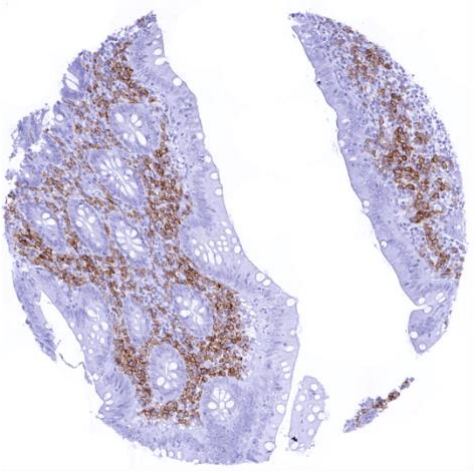
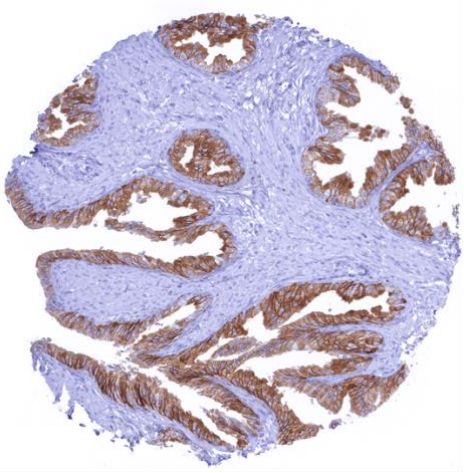
Anti- CD38 Antibody
MSVA-038R / Recombinant Rabbit monoclonal

Human SwissProt	P28907
Human Gene Symbol	CD38
Synonyms	ADP Ribosyl Cyclase 1; cADP-ribose Hydrolase 1; CD38H; NAD(+) Nucleosidase; NIM-R5 Antigen; p45; T10 Acute Lymphoblastic Leukemia Cells Antigen
Specificity	CD38
Immunogen	Synthetic peptide corresponding to residues within aa 190-310 of human CD38 (exact sequence is proprietary)
Isotype	Rabbit / IgG
Species Reactivity	Human

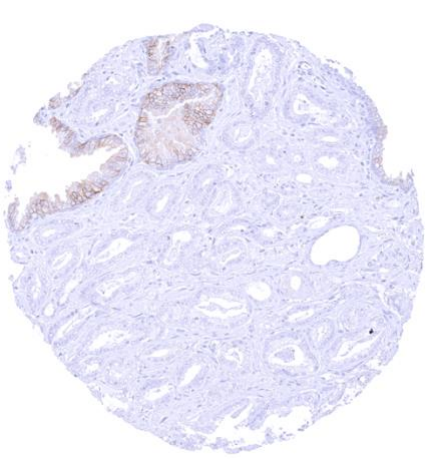
Localization	Membrane
Storage & Stability	Antibody with azide – store at 2 to 8 C. Antibody without azide – store at -20 to -80 C. Antibody is stable for 24 months. Non-hazardous. No MSD required.
Supplied As	200ug/ml of Ab Purified from Bioreactor Concentrate by Protein A/G. Prepared in 10mM PBS with 0.05% BSA & 0.05% azide. Also available without BSA
Positive Control	Prostate: A strong CD38 positivity of epithelial cells should be seen.
Negative Control	Colon: Epithelial cells must be CD38 negative.



In the appendix, CD38 staining occurs in various inflammatory cells while the epithelial cells remain CD38 negative



Strong membranous CD38 staining of prostatic epithelial cells



CD38 negative prostatic adenocarcinoma (Gleason 3+3=6) adjacent to CD38 positive normal epithelium.

Biology

CD38 (cluster of differentiation 38), also termed cyclic ADP ribose hydrolase, is a transmembrane glycoprotein which is predominantly expressed in various types of leukocytes. In these cells, CD38 exerts diverse functions as a receptor and as an enzyme. It is involved in the regulation of cell adhesion, migration, proliferation, intracellular signal transduction, metabolic reprograming, modulation of the cell microenvironment. Accordingly, CD38 plays a pivotal role in immunity. CD38 binding to its ligand CD31 mediates adhesion between leukocytes and the endothelial wall and promotes transmigration. CD38 also regulates the migration of dendritic cell (DC) precursors from blood to peripheral sites, and of mature DCs to lymph nodes. The extracellular enzymatic domain of CD38 is required to synthesize the second messengers cyclic ADP-ribose (cADPR) and nicotinic acid adenine dinucleotide phosphate (NAADP) that are both essential for intracellular calcium homeostasis. In normal tissues, membranous CD38 expression occurs in diverse inflammatory cells, endothelial cells at selected locations as well as in the epithelium of the prostate and of seminal vesicles. CD38 can be highly overexpressed in plasmocytoma as compared to normal plasma cells. CD38 thus serves as a target for monoclonal antibody drugs such as daratumumab in malignant myeloma. CD38 positivity also occurs in various other hematological malignancies, a fraction of prostatic adenocarcinomas and can also be seen in other epithelial tumors.

Potential Research Applications

-The prognostic role of CD38 expression in hematological neoplasms is of further interest.
-The prognostic role of CD38 expression in prostate cancer is unknown.
-The prevalence of CD38 expression in hematological malignancies is unclear.
-The therapeutic benefit of anti CD38 drugs for epithelial neoplasms is unknown.

Protocol Suggestions

Dilution: 1:50. pH 9 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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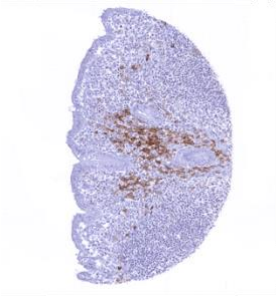
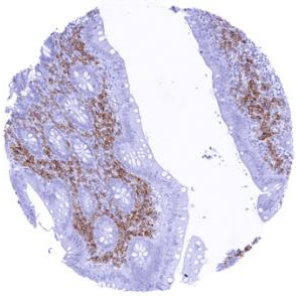
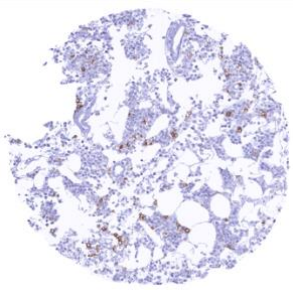


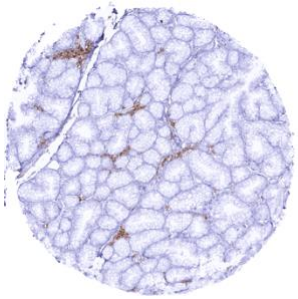
Appendix, mucosa – Strong CD38 staining of a subset of inflammatory cells



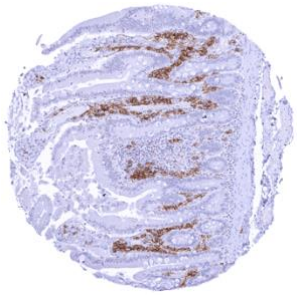
Appendix, mucosa



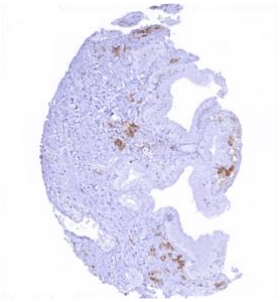
Bone marrow – Distinct CD38 staining of a subset of cells



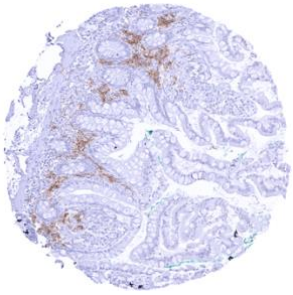
Duodenum, Brunner gland – CD38 staining of some inflammatory cells



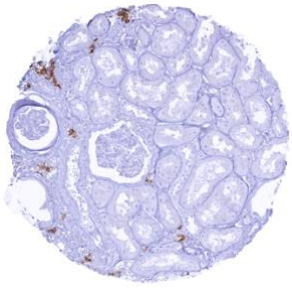
Duodenum, mucosa – Distinct CD38 staining of a subset of inflammatory cells



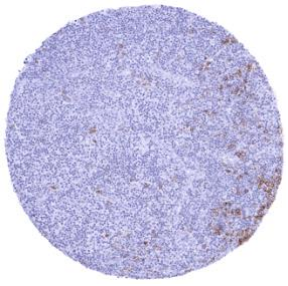
Gallbladder, epithelium – Distinct CD38 staining of a subset of inflammatory cells



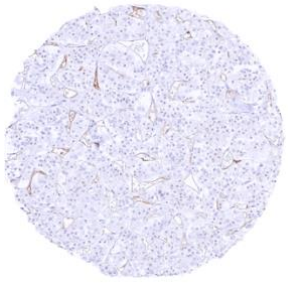
Ileum, mucosa – Distinct CD38 staining of a some inflammatory cells



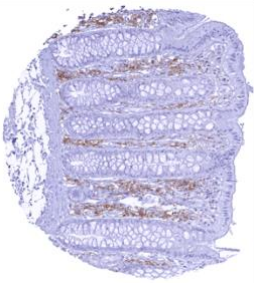
Kidney, cortex – CD38 staining of some inflammatory cells



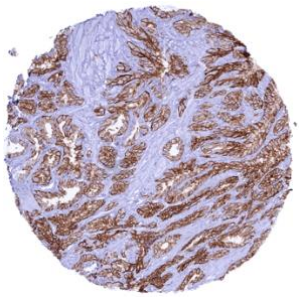
Lymph node – Distinct CD38 staining of a subset of lympho--monocytic cells



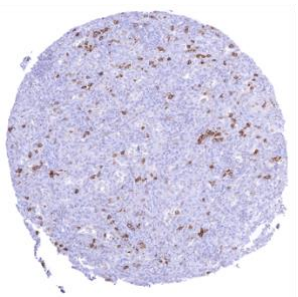
Pituitary gland, anterior lobe – Weak to moderate CD38 staining of endothelial cells in at least a subset small blood vessels



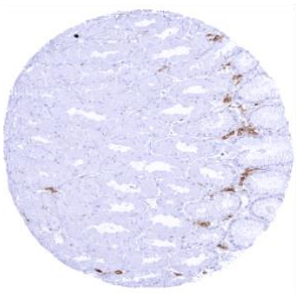
Rectum, mucosa



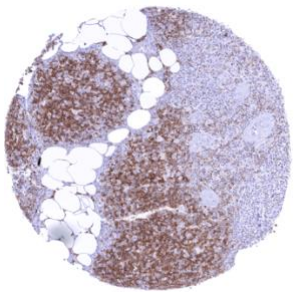
Seminal vesicle – Strong membranous CD38 staining of epithelial cells



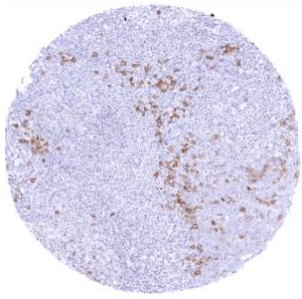
Spleen – Distinct CD38 staining of a subset of lympho--monocytic cells



Stomach, corpus – Distinct CD38 staining of a some inflammatory cells



Thymus – CD38 staining intensity is highest in cortical thymocytes



Tonsil – Distinct CD38 staining of a subset of lympho-- histiocytic cells. CD38 staining is particularly prominent in cells (plasma cells_) located near the tonsil crypts