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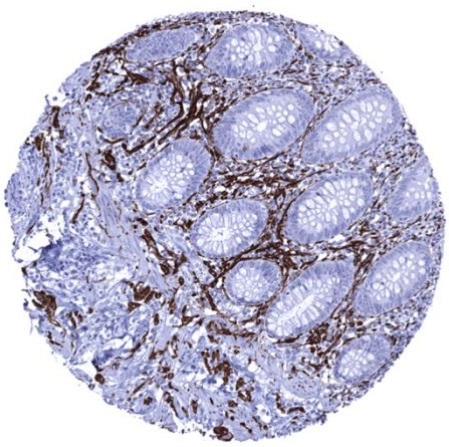
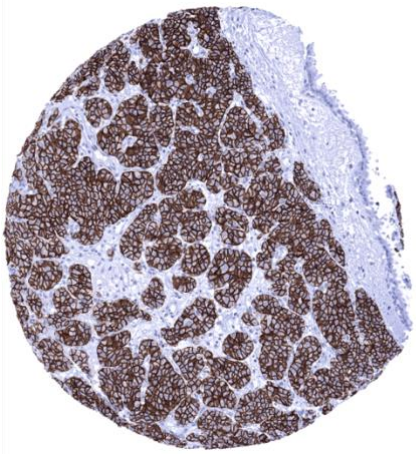
Anti- CD56 Antibody
MSVA-056R / Recombinant Rabbit monoclonal

Human SwissProt	P13591
Human Gene Symbol	CD56
Synonyms	NCAM, Leu-19, NKH1, MSK39, NCAM120, NCAM140, NCAM180, Neural Cell Adhesion Molecule
Specificity	CD56
Immunogen	Recombinant human CD56 fragment
Isotype	Rabbit / IgG
Species Reactivity	Human
Localization	Cell surface

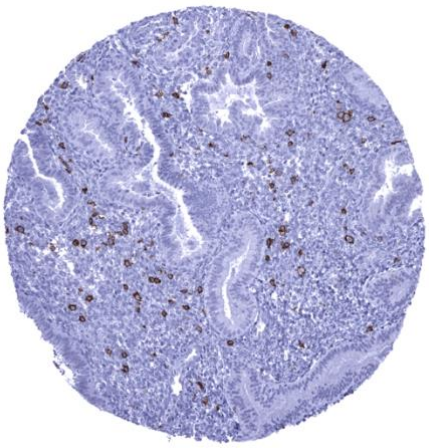
Storage & Stability	Antibody with azide – store at 2 to 8 C. Antibody without azide – store at -20 to -80 C. Antibody is stable for 24 months. Non-hazardous. No MSD required.
Supplied As	200ug/ml of Ab Purified from Bioreactor Concentrate by Protein A/G. Prepared in 10mM PBS with 0.05% BSA & 0.05% azide. Also available without BSA
Positive Control	Tonsil: A small subset of (mainly interfollicular) lymphocytes should show a moderate to strong CD56 immunostaining. A weak to moderate staining can also be seen in fibroblastic reticular cells.
Negative Control	Tonsil: Epithelial cells and the vast majority of lymphocytes should not show any CD56 immunostaining.



Intense CD56 immunostaining of nerve fibres in the appendix mucosa.



Strong membranous CD56 staining in a neuroendocrine tumor of the lung.



CD56 positive NK-cells are particularly frequent in the endometrium.

Biology

Neural cell adhesion molecule (NCAM; CD56), is a glycoprotein of the Immunoglobulin (Ig) superfamily. CD56 appears on early embryonic cells where it contributes to cell-cell adhesion and cell-matrix adhesion and supports the formation of cell aggregates at several sites of morphogenesis. Later in development, CD56 expression is found on various differentiated tissues. In nerves, CD56 regulates neurite outgrowth and interactions between neurons and between neurons and muscle. During hematopoiesis, CD56 is the prototypic marker of NK cells, also present on a subset of CD4+ T cells and CD8+ cells. NCAM has also been used as a target molecule for experimental antibody-based immunotherapy. Among normal tissues, CD56 immunostaining occurs in neural/neuroendocrine, inflammatory, epithelial and mesenchymal cell types. CD56 immunostaining is particularly strong in neurons, axons and glia cells of the brain, the neurohypophysis, the adrenal medulla, and in peripheral nerve fibres and ganglion cells which are for example seen in the lamina propria and muscular walls of the gastrointestinal tract. A moderate to strong CD56 immunostaining occurs in scattered inflammatory cells in lymphatic organs, the bone marrow and (at particularly high numbers) in the endometrium. Among tumors, CD56-positivity commonly occurs in neuroendocrine neoplasms, neuroblastoma, osteosarcoma, chondrosarcoma, pheochromocytoma, and the Ewing's sarcoma family of tumors but can – less frequently - also be seen in various other tumor entities.

Potential Research Applications

-The clinical and biological significance of CD56(bright) NK cells requires further investigation.
-The role of CD56 as a therapeutic target is under investigation.
-The role of endometrial (CD56 positive) natural killer cells is unclear.

Protocol Suggestions

Dilution: 1:150 ; 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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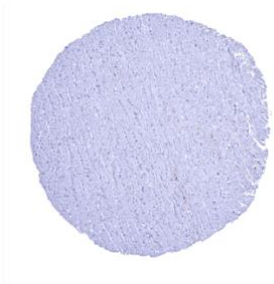
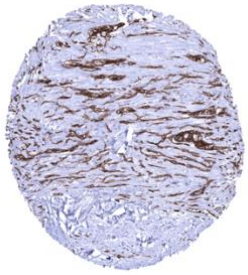
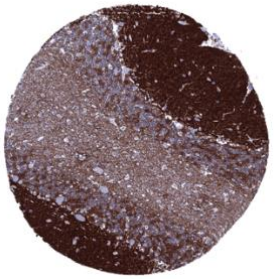


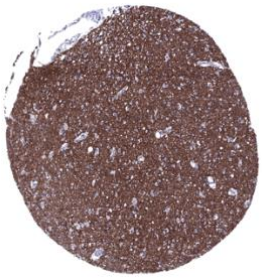
Aorta, media



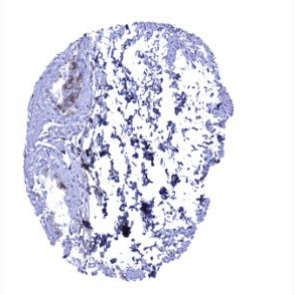
Appendix, muscular wall - Nerve fibres and ganglia show strong CD56 immunostaining



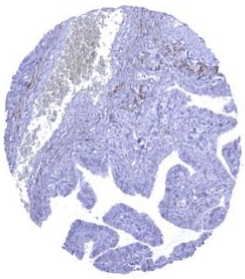
Cerebellum (molecular layer, Purkinje cell layer, granule cell layer, white matter) - CD56 immunostaining is particularly strong in neurons, axons and glia cells of the brain



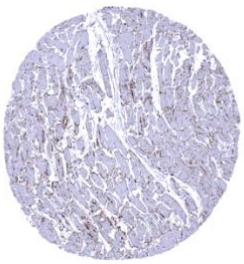
Cerebrum, white matter - CD56 immunostaining is particularly strong in neurons, axons and glia cells of the brain



Epididymis - A membranous CD56 immunostaining occurs in the cauda (and not the corpus) epididymis

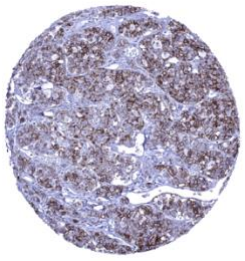


Fallopian tube, mucosa

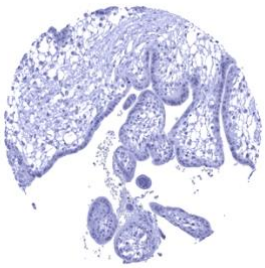


Heart muscle - CD56 immunostaining of membreans of heart muscle is not seen by other CD56 antibodies and thus considered an (tolerable) cross-reactivity

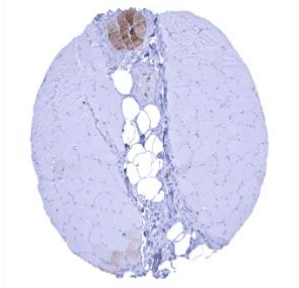
Pituitary gland, posterior lobe - A strong CD56 immunostaining is seen in the neurohypophysis



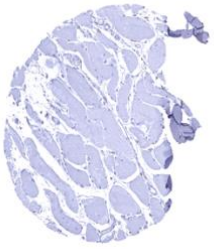
Pituitary, anterior lobe



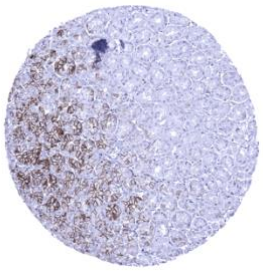
Placenta, early



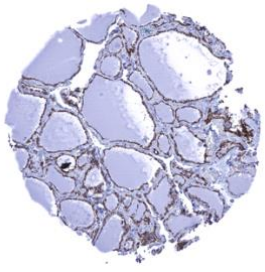
Skeletal muscle - A cytoplasmic staining of skeletal muscle cells can occasionally be seen and is considered a (tolerable) cross-reactivity



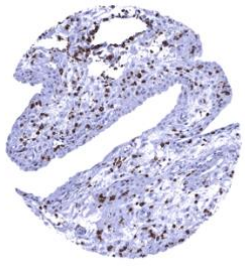
Skeletal muscle



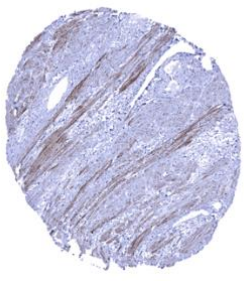
Stomach, corpus - A moderate to strong membranous CD56 immunostaining occurs in most glandular cells of the stomach



Thyroid gland - A strong membranous CD56 immunostaining of follicle cells is seen in the thyroid



Uterus, endometrium (pregnancy) - CD56 positive NK-cells are particularly frequent in the endometrium



Uterus, myometrium - A weak to moderate CD56 immunostaining occurs in muscle fibres of the myometrium