10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

CD6 Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1996a

Product Information

Application	WB, IHC, FC, E
Primary Accession	P30203
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	6B11G6
Isotype	IgG2b
Calculated MW	71801
Description	This gene encodes a protein found on the outer membrane of T-lymphocytes as well as some other immune cells. The encoded protein contains three scavenger receptor cysteine-rich (SRCR) domains and a binding site for an activated leukocyte cell adhesion molecule. The gene product is important for continuation of T cell activation. This gene may be associated with susceptibility to multiple sclerosis (PMID: 19525953, 21849685). Multiple transcript variants encoding different isoforms have been found for this gene.
Immunogen	Purified recombinant fragment of human CD6 (AA: Extra(18-199)) expressed in E. Coli.
Formulation	Purified antibody in PBS with 0.05% sodium azide.

Additional Information

Gene ID	923
Other Names	T-cell differentiation antigen CD6, T12, TP120, CD6, CD6
Dilution	WB~~1/500 - 1/2000 IHC~~1/200 - 1/1000 FC~~1/200 - 1/400 E~~1/10000
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	CD6 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	CD6 (HGNC:1691)
Function	Cell adhesion molecule that mediates cell-cell contacts and regulates T-cell

responses via its interaction with ALCAM/CD166 (PubMed:15048703, PubMed:15294938, PubMed:16352806, PubMed:16914752, PubMed:24584089, PubMed:24945728). Contributes to signaling cascades triggered by activation of the TCR/CD3 complex (PubMed:24584089). Functions as a costimulatory molecule; promotes T-cell activation and proliferation (PubMed:15294938, PubMed:16352806, PubMed:16914752). Contributes to the formation and maturation of the immunological synapse (PubMed:15294938, PubMed:16352806). Functions as a calcium- dependent pattern receptor that binds and aggregates both Gram-positive and Gram-negative bacteria. Binds both lipopolysaccharide (LPS) from Gram-negative bacteria and lipoteichoic acid from Gram-positive bacteria (PubMed:17601777). LPS binding leads to the activation of signaling cascades and down-stream MAP kinases (PubMed:17601777). Mediates activation of the inflammatory response and the secretion of pro-inflammatory cytokines in response to LPS (PubMed:17601777).

Cellular Location

Cell membrane; Single-pass type I membrane protein. Note=Detected at the immunological synapse, i.e, at the contact zone between antigen-presenting dendritic cells and T-cells (PubMed:15294938, PubMed:16352806). Colocalizes with the TCR/CD3 complex at the immunological synapse (PubMed:15294938)

Tissue Location

Detected on thymocytes (PubMed:15294938). Detected on peripheral blood T-cells (PubMed:15048703, PubMed:16352806) Detected on natural killer (NK) cells (PubMed:16352806). Soluble CD6 is detected in blood serum (at protein level) (PubMed:17601777). Detected in spleen, thymus, appendix, lymph node and peripheral blood leukocytes (PubMed:9013954). Expressed by thymocytes, mature T-cells, a subset of B-cells known as B-1 cells, and by some cells in the brain

References

1. J Autoimmun. 2010 Dec;35(4):336-41.2. Proc Natl Acad Sci U S A. 2007 Jul 10;104(28):11724-9.

Images

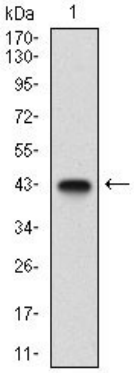
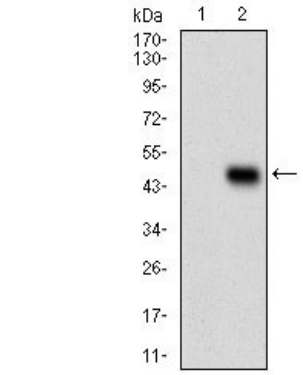


Figure 1: Western blot analysis using CD6 mAb against human CD6 (AA: Extra(18-199)) recombinant protein. (Expected MW is 44.8 kDa)

Figure 2: Western blot analysis using CD6 mAb against HEK293 (1) and CD6 (AA: Extra(18-199))-hIgGFc transfected HEK293 (2) cell lysate.



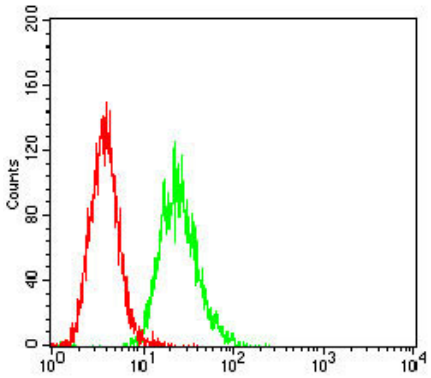


Figure 3: Flow cytometric analysis of Hela cells using CD6 mouse mAb (green) and negative control (red).

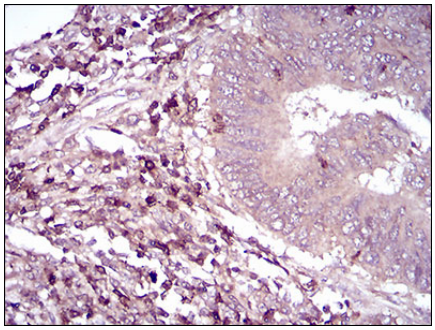


Figure 4: Immunohistochemical analysis of paraffin-embedded rectum cancer tissues using CD6 mouse mAb with DAB staining.

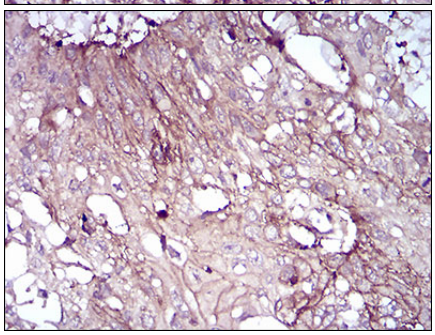


Figure 5: Immunohistochemical analysis of paraffin-embedded esophageal cancer tissues using CD6 mouse mAb with DAB staining.