abcam

Product datasheet

Anti-CD13 antibody [22A5] ab20136

KO VALIDATED

1 References 2 Images

Overview

Product name	Anti-CD13 antibody [22A5]
Description	Mouse monoclonal [22A5] to CD13
Host species	Mouse
Specificity	Specific to CD13. 22A5 can be used for leukaemia diagnosis and immunophenotyping
Tested applications	**Suitable for:** Flow Cyt, IHC-P
Species reactivity	**Reacts with:** Human
Immunogen	Tissue, cells or virus corresponding to CD13. A cell suspension containing osteoclasts from osteoclastomas
Positive control	Flow Cyt: THP1 cells. IHC-P: Human colon tissue.
General notes	The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.
Storage buffer	Constituent: PBS
Purity	Protein A/G purified
Clonality	Monoclonal
Clone number	22A5
Myeloma	P3x63-Ag8.653
Isotype	IgG2a

Light chain type	unknown

Applications

The Abpromise guarantee Our Abpromise guarantee covers the use of ab20136 in the following tested applications.

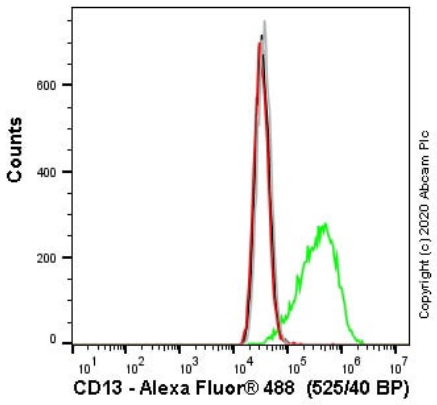
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
Flow Cyt		Use at an assay dependent concentration. ab170191 - Mouse monoclonal IgG2a, is suitable for use as an isotype control with this antibody.
IHC-P		Use at an assay dependent concentration.

Target

Function	Broad specificity aminopeptidase. Plays a role in the final digestion of peptides generated from hydrolysis of proteins by gastric and pancreatic proteases. May play a critical role in the pathogenesis of cholesterol gallstone disease. May be involved in the metabolism of regulatory peptides of diverse cell types including small intestinal and tubular epithelial cells, macrophages, granulocytes and synaptic membranes from the CNS. Found to cleave antigen peptides bound to major histocompatibility complex class II molecules of presenting cells and to degrade neurotransmitters at synaptic junctions. Is also implicated as a regulator of IL-8 bioavailability in the endometrium, and therefore may contribute to the regulation of angiogenesis. Is used as a marker for acute myeloid leukemia and plays a role in tumor invasion. In case of human coronavirus 229E (HCoV-229E) infection, serves as receptor for HCoV-229E spike glycoprotein. Mediates as well human cytomegalovirus (HCMV) infection.
Tissue specificity	Expressed in epithelial cells of the kidney, intestine, and respiratory tract; granulocytes, monocytes, fibroblasts, endothelial cells, cerebral pericytes at the blood-brain barrier, synaptic membranes of cells in the CNS. Also expressed in endometrial stromal cells, but not in the endometrial glandular cells. Found in the vasculature of tissues that undergo angiogenesis and in malignant gliomas and lymph node metastases from multiple tumor types but not in blood vessels of normal tissues. A soluble form has been found in plasma. It is found to be elevated in plasma and effusions of cancer patients.
Sequence similarities	Belongs to the peptidase M1 family.
Domain	Amino acids 260-353 are essential to mediate susceptibility to infection with HCoV-229E (in porcine/human chimeric studies) and more specifically amino acids 288-295 (mutagenesis studies).
Post-translational modifications	Sulfated. N- and O-glycosylated. May undergo proteolysis and give rise to a soluble form.
Cellular localization	Cell membrane. Cytoplasm > cytosol. A soluble form has also been detected.

Images



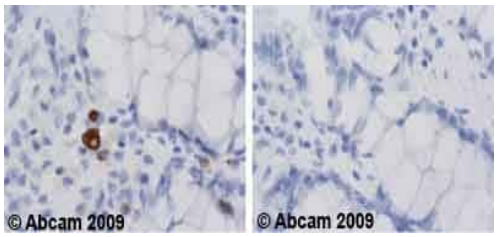
Flow Cytometry - Anti-CD13 antibody [22A5] (ab20136)

Flow cytometry overlay histogram showing wild-type THP1 (green line) and ANPEP knockout THP1 cells (ab273759) stained with ab20136 (red line). The cells were incubated in 1x PBS containing 10µg/ml human IgG and 10% normal goat serum to block FC receptors and non-specific protein-protein interaction followed by the antibody (ab20136) ($1x10^6$ in 100µl at 1 µg/ml) for 30 min at 4°C.

The secondary antibody Goat anti-mouse IgG H&L (Alexa Fluor® 488, pre-adsorbed) (ab150117) was used at 1/2000 for 30 min at 4°C.

Isotype control antibody was mouse IgG2aκ (ab18413) used at the same concentration and conditions as the primary antibody (wild-type THP1 cells - black line; ANPEP knockout THP1 cells ab273759 - grey line). Unlabelled sample was also used as a control (this line is not shown for the purpose of simplicity).

Acquisition of >5000 events were collected using a 50 mW Blue laser (488nm) and 525/40 bandpass filter.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD13 antibody [22A5] (ab20136)

Ab20136 staining Human normal colon. Staining is localized to the membrane.
Left panel: with primary antibody at 1 ug/ml. Right panel: isotype control.
Sections were stained using an automated system DAKO Autostainer Plus , at room temperature. Sections were rehydrated and antigen retrieved with the Dako 3-in-1 AR buffer EDTA pH 9.0 in a DAKO PT Link. Slides were peroxidase blocked in 3% H2O2 in methanol for 10 minutes. They were then blocked with Dako Protein block for 10 minutes (containing casein 0.25% in PBS), then incubated with primary antibody for 20 minutes, and detected with Dako Envision Flex amplification kit for 30 minutes. Colorimetric detection was completed with diaminobenzidine for 5 minutes. Slides were counterstained with Haematoxylin and coverslipped under DePeX. Please note that for manual staining we recommend to optimize the primary antibody concentration and incubation time (overnight incubation), and amplification may be required.

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