

Mouse anti-Pig CD335 Monoclonal Antibody | anti-CD335 antibody

MOUSE ANTI PIG CD335:RPE

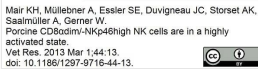
CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA12295	Mouse	Pig	Flow Cytometry, Functional Assay

PRODUCT SYNONYMS

CD335; Monoclonal Antibody; MOUSE ANTI PIG CD335:RPE; NKp46; anti-CD335 antibody

PRODUCT SPECIFICATIONS

Host	Mouse
Reactivity	Pig
Clonality	Monoclonal
Isotype	IgG1
Clone Number	VIV-KM1
Purity/Purification	Purified IgG prepared by affinity chromatography on Protein A from tissue culture supernatant
Form/Format	Purified IgG conjugated to R. Phycoerythrin (RPE) - lyophilized ALEXA FLUOR 488, ALEXA FLUOR 647, APC, Purified, RPE Phosphate buffered saline 0.09% Sodium Azide (NaN ₃) 1% Bovine Serum Albumin 5% Sucrose
Applicable Applications for anti-CD335 antibody	FCM/FACS (Flow Cytometry)
Application Notes	FC/FACS: Min Neat
Immunogen	Fusion protein consisting of the extracellular region of porcine CD335.
Reconstitution	Reconstitute with 1 ml distilled water



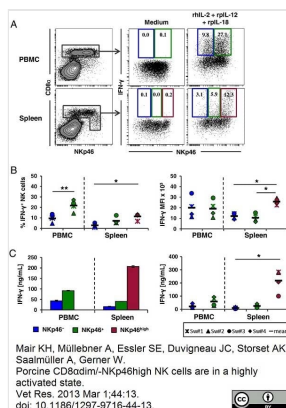
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Published investigator image: Mouse anti Pig CD335 antibody, clone VIV-KM1 used for the evaluation of CD335 expression on porcine cells by flow cytometry. Image caption: Nkp46high NK cells in spleen showed the highest cytolytic capacity. The cytolytic capacity of Nkp46-defined NK-cell subsets (CD87+Nkp46-: blue, CD87+Nkp46+: green, CD87dim/-Nkp46high: red) isolated from spleen was analysed after receptor-mediated degranulation. Cells were stimulated and gated for flow cytometric analysis as outlined in Figure 4. (A) Numbers indicate the percentage of CD107a+ cells and the mean fluorescence intensity of CD107a within respective Nkp46-gates. Results are representative of experiments with five different animals. (B) CD107a expression analyses of five animals analysed. The proportion of CD107a+ cells within the different Nkp46-defined subsets is shown in the upper graphs. Percentage of CD107a+ NK cells was calculated by subtracting spontaneous degranulation observed in cultures stimulated with isotype-control antibodies from the frequency of CD107a+ cells in cultures stimulated with Nkp46 and/or CD16 mAbs. The lower graphs show the mean fluorescence intensity of CD107a within the respective subsets. Mean values are represented by a black bar. Significant differences between the subsets are indicated (* = p



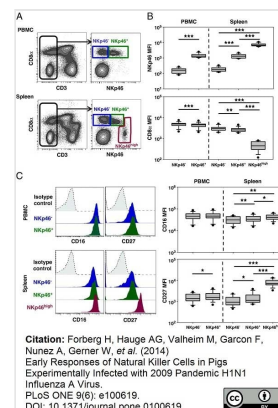
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Published investigator image: Mouse anti Pig CD335 antibody, clone VIV-KM1 used for the evaluation of CD335 expression on porcine cells by flow cytometry. Image caption: Analysis of degranulation capacity in Nkp46-defined NK-cell subsets in blood. The cytolytic capacity of Nkp46-defined NK-cell subsets (CD8?⁺Nkp46⁻: blue, CD8?⁺Nkp46⁺: green) isolated from blood was analysed after receptor triggering. Cells were stimulated with rIL-2 and rIL-15 overnight. Triggering of NK-receptors was performed by using monoclonal antibodies against Nkp46, CD16 or a combination of both. Irrelevant isotype-matched antibody served as negative control. NK-cell receptor mediated degranulation was assessed by measuring the expression of CD107a on the cell surface by four-colour flow cytometry after one hour incubation. CD107a expression was measured on CD3- lymphocytes (not shown), followed by gating on the respective Nkp46-defined NK subsets. (A) Numbers indicate the percentage of CD107a⁺ cells and the mean fluorescence intensity of CD107a within respective Nkp46-gates. Results are representative of experiments with five different animals. (B) CD107a expression analyses of five animals analysed. The proportion of CD107a⁺ cells within the different Nkp46-defined subsets is shown in the upper graphs. Percentage of CD107a⁺ NK cells was calculated by subtracting spontaneous degranulation observed in cultures stimulated with isotype-control antibodies from the frequency of CD107a⁺ cells in cultures stimulated with Nkp46 and/or CD16 mAbs. The lower graphs show the mean fluorescence intensity of CD107a within the respective subsets. Mean values are represented by a black bar. Significant differences between the subsets are indicated (* = p



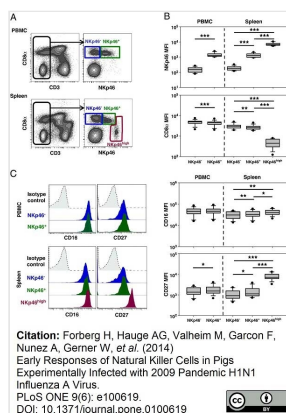
Application Data

Published investigator image: Mouse anti Pig CD335 antibody, clone VIV-KM1 used for the evaluation of CD335 expression on porcine cells by flow cytometry. Image caption: Splenic NKp46high NK cells produced the highest levels of IFN- γ . (A + B) Intracellular cytokine staining for IFN- γ production in NKp46-defined NK cells within PBMC (upper graphs) and splenocytes (lower graphs) by four-colour FCM after 24 h in vitro stimulation with rhIL-2, rIL-12 and rIL-18 or medium. CD3- lymphocytes were gated (not shown) and NKp46/CD8 γ defined total NK cells were further subgated for IFN- γ production. IFN- γ producing NK cells were gated according to NKp46 expression levels (CD8 γ +NKp46-: blue, CD8 γ +NKp46+: green, CD8 γ dim/-NKp46high: red). (A) Numbers indicate the percentage of IFN- γ + NK cells within respective gates. Results are representative for experiments with four different animals. (B) Percentage of IFN- γ + cells (left graph) and mean fluorescence intensity of IFN- γ + cells (right graph) within the different NK-cell subsets in blood and spleen of four animals are shown. (C) Supernatants of cytokine stimulated FACS-sorted CD3-CD8 γ +NKp46- and CD3-CD8 γ +NKp46+ NK cells from blood and CD3-CD8 γ +NKp46-, CD3-CD8 γ +NKp46+ and CD3-CD8 γ dim/-NKp46high NK cells from spleen were tested for IFN- γ production in ELISA following 24 h in vitro stimulation with rhIL-2, rIL-12 and rIL-18. Data on the left are from one representative animal and displayed as the mean of duplicates $\pm$ SD. IFN- γ production in experiments with four animals analysed is shown on the right. Mean values are represented by a black bar. (B + C) Significant differences between the subsets in blood or spleen are indicated (* = p



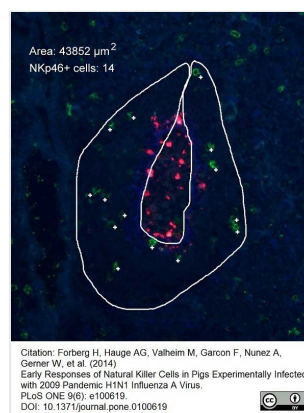
Application Data

Published investigator image: Mouse anti Pig CD335 antibody, clone VIV-KM1 used for the evaluation of CD335 expression on porcine cells by flow cytometry. Image caption: Varying expression of NKp46, CD8 γ , CD16 and CD27 on NK-cell subsets in blood and spleen. (A) Following five-colour staining, PBMC and splenocytes were gated on CD3- cells and further subgated according to their NKp46/CD8 γ expression pattern in NKp46- and NKp46+ NK cells in blood (upper graph) and NKp46-, NKp46+ and NKp46high NK cells in spleen (lower graph). (B) 14 healthy 6–7 month old pigs were investigated for NKp46 and CD8 γ expression levels in the NKp46-defined NK-cell subsets. Box-plots show the mean fluorescence intensity of the two markers. (C) NK-cell subsets defined in (A) were further analysed for their expression of the surface markers CD16 and CD27. Histograms show the expression of the two markers within the respective NKp46-defined subsets (CD8 γ +NKp46-: blue histograms, CD8 γ +NKp46+: green histograms, CD8 γ dim/-NKp46high: red histograms) in blood (upper graphs) and spleen (lower graphs) according to the corresponding isotype control (grey histograms with dotted lines). Box-plots show the mean fluorescence intensity of CD16 and CD27 of the NKp46-defined NK-cell subsets in blood and spleen of 14 healthy 6–7 month old pigs. (B + C) Significant differences between the subsets in blood or spleen are indicated (* = p



Application Data

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Application Data

Published investigator image: Mouse anti Pig CD335 antibody, clone VIV-KM1 used for the identification of NK cells in influenza infected pigs by immunofluorescence. Image caption: Counting of NKp46+ cells. Numbers of NKp46+ cells per area were counted in lung tissue sections from control animals and influenza A virus infected animals as described in Material and Methods. Representative picture of area with virus from infected animal. Immunofluorescence staining, 200x. From: Forberg H, Hauge AG, Valheim M, Garçon F, Nunez A, et al. (2014) Early Responses of Natural Killer Cells in Pigs Experimentally Infected with 2009 Pandemic H1N1 Influenza A Virus.

ADDITIONAL INFORMATION

Related Product Information for anti-CD335 antibody	Mouse anti Pig CD335 antibody, clone VIV-KM1 recognizes the porcine homologue of human CD335, also known as Nkp46 and natural cytotoxicity triggering receptor 1 (NCR1), a member of the natural cytotoxicity receptor (NCR) family. CD335 is a type I transmembrane protein, with two extracellular C2-type immunoglobulin-like domains, which functions as an activating receptor and is involved in the control of viral infection and tumor development. CD335 is expressed by human natural killer cells (Sivori et al.1997). The development of monoclonal antibodies to bovine CD335 (clone AKS1) (Storset et al. 2004) and ovine CD335 (clone EC1.1) (Connelley et al.2011) have enabled researchers to identify and better understand ruminant NK cells. Mouse anti Pig CD335 antibody, clone VIV-KM is the first monoclonal developed to specifically identify porcine CD335 and provides a reagent to facilitate a better understanding of the pig immune system and aid in the understanding of the role of NK cells in host pathogen defense. Porcine CD335 is not expressed by all NK cells and expression may be influenced by cytokine production (Mair et al. 2012).
Product Categories/Family for anti-CD335 antibody	Primary

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/monoclonal/cd335-antibody-clone-viv-km1-flow-cytometry-elisa/12295>