

Product Data Sheet

CD99 / MIC2 Antibody (HO36-1.1)

Tested Species Reactivity	Published Species Reactivity
Human (Hu)	Human (Hu)
Rat (Rt)	

Tested Applications	Dilution *
Western Blot (WB)	1:100-1:500
Immunofluorescence (IF)	1:10-1:100
Immunocytochemistry (ICC)	1:10-1:100
Immunohistochemistry (Paraffin) (IHC (P))	1:100-200
Flow Cytometry (FACS)	2 ug/test

Published Applications	Dilution
Immunohistochemistry (IHC)	See publications

* Suggested working dilutions are given as a guide only. It is recommended that the user titrates the product for use in their own experiment using appropriate negative and positive controls.

Details	
Catalog Number:	MA5-12954
Size:	500 µL
Class:	Monoclonal
Type:	Antibody
Clone:	HO36-1.1
Host / Isotype:	Mouse / IgM
Immunogen:	Purified E-rosette forming cells from human peripheral blood lymphocytes

Form Information	
Form:	Liquid
Concentration:	0.2mg/ml
Purification:	Ammonium sulfate precipitation
Storage Buffer:	PBS, pH 7.4, with 0.2% BSA
Preservative:	0.09% sodium azide
Storage Conditions:	4° C

Product Specific Information	General Information
------------------------------	---------------------

MA5-12954 targets CD99 in WB, IF, FACS and IHC (P) applications and shows reactivity with Human and Rat samples. This antibody is not suitable for Mouse spleen cells in Western blot analysis.

The MA5-12954 immunogen is purified E-rosette forming cells from human peripheral blood lymphocytes.

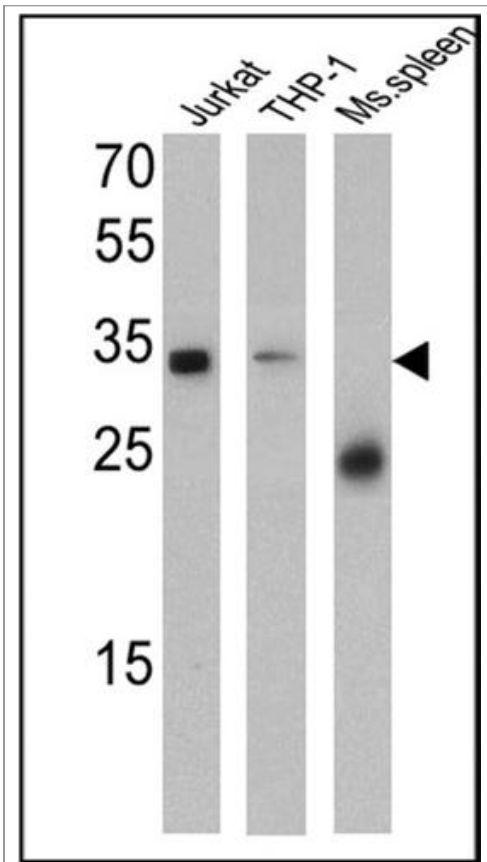
CD99, or MIC2 gene product, or E2 antigen is expressed on the cell membrane of some lymphocytes, cortical thymocytes, and granulosa cells of the ovary. The antigen is also expressed by most pancreatic islet cells, Sertoli cells of the testis, and some endothelial cells. Mature granulocytes express very little or no CD99. MIC2 is strongly expressed on Ewing's sarcoma cells and primitive peripheral neuroectodermal tumors.

This product is for In Vitro experimental use only. Not for resale without express authorization.

Products are warranted to operate or perform substantially in conformance with published Product specifications in effect at the time of sale, as set forth in the Product documentation, specifications and/or accompanying package inserts ("Documentation"). No claim of suitability for use in applications regulated by FDA is made. The warranty provided herein is valid only when used by properly trained individuals. Unless otherwise stated in the Documentation, this warranty is limited to one year from date of shipment when the Product is subjected to normal, proper and intended usage. This warranty does not extend to anyone other than Buyer. Any model or sample furnished to Buyer is merely illustrative of the general type and quality of goods and does not represent that any Product will conform to such model or sample. NO OTHER WARRANTIES, EXPRESS OR IMPLIED, ARE GRANTED, INCLUDING WITHOUT LIMITATION, IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR NON-INFRINGEMENT. BUYER'S EXCLUSIVE REMEDY FOR NON-CONFORMING PRODUCTS DURING THE WARRANTY PERIOD IS LIMITED TO REPAIR, REPLACEMENT OF OR REFUND FOR THE NON-CONFORMING PRODUCT(S), AT SELLER'S SOLE OPTION. THERE IS NO OBLIGATION TO REPAIR, REPLACE OR REFUND FOR PRODUCTS AS THE RESULT OF (I) ACCIDENT, DISASTER OR EVENT OF FORCE MAJEURE, (II) MISUSE, FAULT OR NEGLIGENCE OF OR BY BUYER, (III) USE OF THE PRODUCTS IN A MANNER FOR WHICH THEY WERE NOT DESIGNED, OR (IV) IMPROPER STORAGE AND HANDLING OF THE PRODUCTS. Unless otherwise expressly stated on the Product or in the documentation accompanying the Product, the Product is intended for research only and is not to be used for any other purpose, including without limitation, unauthorized commercial uses, in vitro diagnostic uses, ex vivo or in vivo therapeutic uses, or any type of consumption by or application to humans or animals.

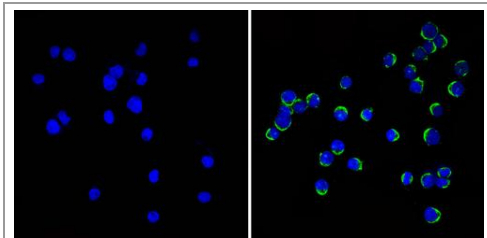
Western Blot with anti-CD99 / MIC2 Monoclonal Antibody [HO36-1.1] (MA5-12954)

Western blot analysis of CD99 was performed by loading 25 ug of Jurkat (Lane 1), THP-1 (Lane 2), and Mouse spleen (Lane 3) cell lysates and a molecular weight protein ladder onto an SDS polyacrylamide gel. Proteins were transferred to a PVDF membrane and blocked with a blocking buffer at 4°C overnight. The membrane was probed with a CD99 monoclonal antibody (Product # MA5-12954) at a dilution of 1:200 (Jurkat and Mouse spleen) and 1:100 (THP-1) overnight at 4°C, washed in TBST, and probed with an HRP-conjugated secondary antibody for 1 hr at room temperature in the dark. Results show a band at 32 kDa in Jurkat and THP-1 cell lysates.



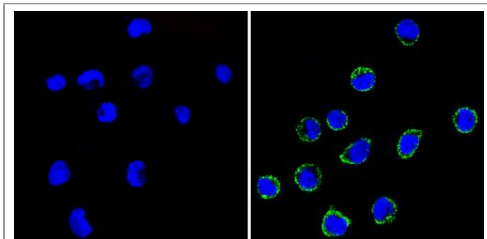
Immunofluorescence with anti-CD99 / MIC2 Monoclonal Antibody [HO36-1.1] (MA5-12954)

Immunofluorescent analysis of CD99 (green) showing staining in the membrane of Jurkat cells (right) compared to a negative control without primary antibody (left). Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with a CD99 monoclonal antibody (Product # MA5-12954) in 3% BSA-PBS at a dilution of 1:20 and incubated overnight at 4°C in a humidified chamber. Cells were washed with PBST and incubated with a DyLight-conjugated secondary antibody in PBS at room temperature in the dark. F-actin (red) was stained with a fluorescent red phalloidin and nuclei (blue) were stained with Hoechst or DAPI. Images were taken at a magnification of 60x.



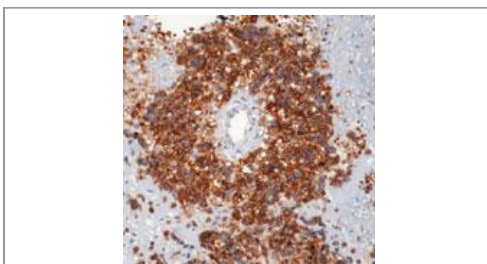
Immunofluorescence with anti-CD99 / MIC2 Monoclonal Antibody [HO36-1.1] (MA5-12954)

Immunofluorescent analysis of CD99 (green) showing staining in the membrane of THP-1 cells (right) compared to a negative control without primary antibody (left). Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with a CD99 monoclonal antibody (Product # MA5-12954) in 3% BSA-PBS at a dilution of 1:20 and incubated overnight at 4°C in a humidified chamber. Cells were washed with PBST and incubated with a DyLight-conjugated secondary antibody in PBS at room temperature in the dark. F-actin (red) was stained with a fluorescent red phalloidin and nuclei (blue) were stained with Hoechst or DAPI. Images were taken at a magnification of 60x.



Immunohistochemistry with anti-CD99 / MIC2 Monoclonal Antibody [HO36-1.1] (MA5-12954)

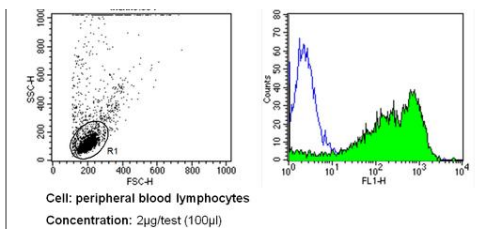
Formalin-fixed, paraffin-embedded human Ewing's sarcoma stained with CD99 antibody using peroxidase-conjugate and DAB chromogen. Note cell membrane staining of tumor cells.



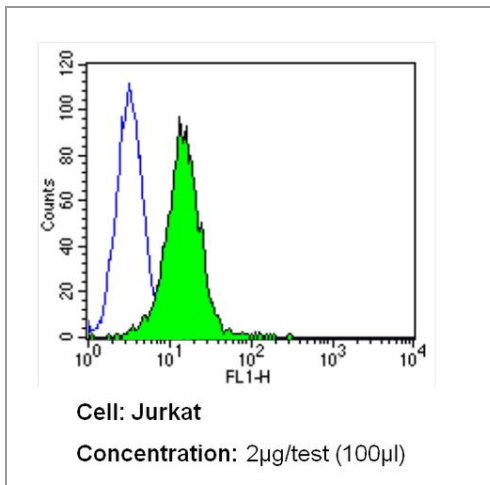
Flow Cytometry with anti-CD99 / MIC2 Monoclonal Antibody [HO36-1.1] (MA5-12954)

This product is for In Vitro experimental use only. Not for resale without express authorization.

Products are warranted to operate or perform substantially in conformance with published Product specifications in effect at the time of sale, as set forth in the Product documentation, specifications and/or accompanying package inserts ("Documentation"). No claim of suitability for use in applications regulated by FDA is made. The warranty provided herein is valid only when used by properly trained individuals. Unless otherwise stated in the Documentation, this warranty is limited to one year from date of shipment when the Product is subjected to normal, proper and intended usage. This warranty does not extend to anyone other than Buyer. Any model or sample furnished to Buyer is merely illustrative of the general type and quality of goods and does not represent that any Product will conform to such model or sample. NO OTHER WARRANTIES, EXPRESS OR IMPLIED, ARE GRANTED, INCLUDING WITHOUT LIMITATION, IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR NON INFRINGEMENT. BUYER'S EXCLUSIVE REMEDY FOR NON-CONFORMING PRODUCTS DURING THE WARRANTY PERIOD IS LIMITED TO REPAIR, REPLACEMENT OF OR REFUND FOR THE NON-CONFORMING PRODUCT(S) AT SELLER'S SOLE OPTION. THERE IS NO OBLIGATION TO REPAIR, REPLACE OR REFUND FOR PRODUCTS AS THE RESULT OF (I) ACCIDENT, DISASTER OR EVENT OF FORCE MAJEURE, (II) MISUSE, FAULT OR NEGLIGENCE OF OR BY BUYER, (III) USE OF THE PRODUCTS IN A MANNER FOR WHICH THEY WERE NOT DESIGNED, OR (IV) IMPROPER STORAGE AND HANDLING OF THE PRODUCTS. Unless otherwise expressly stated on the Product or in the documentation accompanying the Product, the Product is intended for research only and is not to be used for any other purpose, including without limitation, unauthorized commercial uses, in vitro diagnostic uses, ex vivo or in vivo therapeutic uses, or any type of consumption by or application to humans or animals.



Flow cytometry analysis of CD99 in PBMC cells (green) compared to an isotype control (blue). Human blood was collected, combined with a hydrophilic polysaccharide, centrifuged, transferred to a conical tube and washed with PBS. 50 ul of cell solution was added to each tube at a dilution of 2×10^7 cells/ml, followed by the addition of 50 ul of isotype control and primary antibody (Product # MA5-12954) at a dilution of 2 ug/test. Cells were incubated for 30 min at 4°C and washed with a cell buffer, followed by incubation with a DyLight 488-conjugated secondary antibody for 30 min at 4°C in the dark. FACS analysis was performed using 400 ul of cell buffer.



Flow Cytometry with anti-CD99 / MIC2 Monoclonal Antibody [HO36-1.1] (MA5-12954)

Flow cytometry analysis of CD99 in Jurkat cells (green) compared to an isotype control (blue). Cells were harvested, adjusted to a concentration of $1-5 \times 10^6$ cells/ml, fixed with 2% paraformaldehyde and washed with PBS. Cells were blocked with a 2% solution of BSA-PBS for 30 min at room temperature and incubated with a CD99 monoclonal antibody (Product # MA5-12954) at a dilution of 2 ug/test for 60 min at room temperature. Cells were then incubated for 40 min at room temperature in the dark using a DyLight 488-conjugated secondary antibody and re-suspended in PBS for FACS analysis.

This product is for In Vitro experimental use only. Not for resale without express authorization.

Products are warranted to operate or perform substantially in conformance with published Product specifications in effect at the time of sale, as set forth in the Product documentation, specifications and/or accompanying package inserts ("Documentation"). No claim of suitability for use in applications regulated by FDA is made. The warranty provided herein is valid only when used by properly trained individuals. Unless otherwise stated in the Documentation, this warranty is limited to one year from date of shipment when the Product is subjected to normal, proper and intended usage. This warranty does not extend to anyone other than Buyer. Any model or sample furnished to Buyer is merely illustrative of the general type and quality of goods and does not represent that any Product will conform to such model or sample. NO OTHER WARRANTIES, EXPRESS OR IMPLIED, ARE GRANTED, INCLUDING WITHOUT LIMITATION, IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR NON-INFRINGEMENT. BUYER'S EXCLUSIVE REMEDY FOR NON-CONFORMING PRODUCTS DURING THE WARRANTY PERIOD IS LIMITED TO REPAIR, REPLACEMENT OF OR REFUND FOR THE NON-CONFORMING PRODUCT(S), AT SELLER'S SOLE OPTION. THERE IS NO OBLIGATION TO REPAIR, REPLACE OR REFUND FOR PRODUCTS AS THE RESULT OF (I) ACCIDENT, DISASTER OR EVENT OF FORCE MAJEURE, (II) MISUSE, FAULT OR NEGLIGENCE OF OR BY BUYER, (III) USE OF THE PRODUCTS IN A MANNER FOR WHICH THEY WERE NOT DESIGNED, OR (IV) IMPROPER STORAGE AND HANDLING OF THE PRODUCTS. Unless otherwise expressly stated on the Product or in the documentation accompanying the Product, the Product is intended for research only and is not to be used for any other purpose, including without limitation, unauthorized commercial uses, in vitro diagnostic uses, ex vivo or in vivo therapeutic uses, or any type of consumption by or application to humans or animals.

3 Immunohistochemistry References

Species / Dilution	Summary
Hu / 1:50	<p>MA5-12954 was used in immunohistochemistry to report a clinical case of uterine carcinosarcoma with unique features</p> <hr/> <p>Lung Cancer. 2009 Jun;64(3):371-7. "Uterine carcinosarcoma metastatic to the lung as large-cell neuroendocrine carcinoma with synchronous sarcoid granulomatosis." Author(s): Froio E, D'Adda T, Fellegara G, Martella E, Caruana P, Pruneri G, Pesci A, Rindi G Number of Citations: 1 PubMed Article URL: http://www.ncbi.nlm.nih.gov/pubmed/19111933</p>
Hu / 1:100	<p>MA5-12954 was used in immunohistochemistry to investigate the secretion of anti-diuretic hormone in neuroblastoma</p> <hr/> <p>Endocr Pathol. 2010 Dec;21(4):266-73. "Primary sellar neuroblastoma presenting with syndrome of inappropriate secretion of anti-diuretic hormone." Author(s): Radotra B, Apostolopoulos V, Sandison A, Hatfield EC, Mendoza N, Moss J, Mehta A, Glaser M, Meeran K, Roncaroli F Number of Citations: 1 PubMed Article URL: http://www.ncbi.nlm.nih.gov/pubmed/21053097</p>
Hu / 1:200	<p>MA5-12954 was used in immunohistochemistry to study the morphological and histological features of neurocytomas in extraventricular locations</p> <hr/> <p>Pathology. 2011 Jun;43(4):327-34. "Extraventricular neurocytomas: a morphological and histogenetic consideration. A study of six cases." Author(s): Agarwal S, Sharma MC, Sarkar C, Suri V, Jain A, Sharma MS, Ailawadhi P, Garg A, Mallick S Number of Citations: 0 PubMed Article URL: http://www.ncbi.nlm.nih.gov/pubmed/21532524</p>

This product is for In Vitro experimental use only. Not for resale without express authorization.

Products are warranted to operate or perform substantially in conformance with published Product specifications in effect at the time of sale, as set forth in the Product documentation, specifications and/or accompanying package inserts ("Documentation"). No claim of suitability for use in applications regulated by FDA is made. The warranty provided herein is valid only when used by properly trained individuals. Unless otherwise stated in the Documentation, this warranty is limited to one year from date of shipment when the Product is subjected to normal, proper and intended usage. This warranty does not extend to anyone other than Buyer. Any model or sample furnished to Buyer is merely illustrative of the general type and quality of goods and does not represent that any Product will conform to such model or sample. NO OTHER WARRANTIES, EXPRESS OR IMPLIED, ARE GRANTED, INCLUDING WITHOUT LIMITATION, IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR NON-INFRINGEMENT. BUYER'S EXCLUSIVE REMEDY FOR NON-CONFORMING PRODUCTS DURING THE WARRANTY PERIOD IS LIMITED TO REPAIR, REPLACEMENT OF OR REFUND FOR THE NON-CONFORMING PRODUCT(S), AT SELLER'S SOLE OPTION. THERE IS NO OBLIGATION TO REPAIR, REPLACE OR REFUND FOR PRODUCTS AS THE RESULT OF (I) ACCIDENT, DISASTER OR EVENT OF FORCE MAJEURE, (II) MISUSE, FAULT OR NEGLIGENCE OF OR BY BUYER, (III) USE OF THE PRODUCTS IN A MANNER FOR WHICH THEY WERE NOT DESIGNED, OR (IV) IMPROPER STORAGE AND HANDLING OF THE PRODUCTS. Unless otherwise expressly stated on the Product or in the documentation accompanying the Product, the Product is intended for research only and is not to be used for any other purpose, including without limitation, unauthorized commercial uses, in vitro diagnostic uses, ex vivo or in vivo therapeutic uses, or any type of consumption by or application to humans or animals.

Product Data Sheet

CD99 / MIC2 Antibody (HO36-1.1)

Tested Species Reactivity	Published Species Reactivity
Human (Hu)	Human (Hu)
Rat (Rt)	

Tested Applications	Dilution *
Western Blot (WB)	1:100-1:500
Immunofluorescence (IF)	1:10-1:100
Immunocytochemistry (ICC)	1:10-1:100
Immunohistochemistry (Paraffin) (IHC (P))	1:100-200
Flow Cytometry (FACS)	2 ug/test

Published Applications	Dilution
Immunohistochemistry (IHC)	See publications

* Suggested working dilutions are given as a guide only. It is recommended that the user titrates the product for use in their own experiment using appropriate negative and positive controls.

Details	
Catalog Number:	MA5-12954
Size:	500 µL
Class:	Monoclonal
Type:	Antibody
Clone:	HO36-1.1
Host / Isotype:	Mouse / IgM
Immunogen:	Purified E-rosette forming cells from human peripheral blood lymphocytes

Form Information	
Form:	Liquid
Concentration:	0.2mg/ml
Purification:	Ammonium sulfate precipitation
Storage Buffer:	PBS, pH 7.4, with 0.2% BSA
Preservative:	0.09% sodium azide
Storage Conditions:	4° C

Product Specific Information	General Information
------------------------------	---------------------

MA5-12954 targets CD99 in WB, IF, FACS and IHC (P) applications and shows reactivity with Human and Rat samples. This antibody is not suitable for Mouse spleen cells in Western blot analysis.

The MA5-12954 immunogen is purified E-rosette forming cells from human peripheral blood lymphocytes.

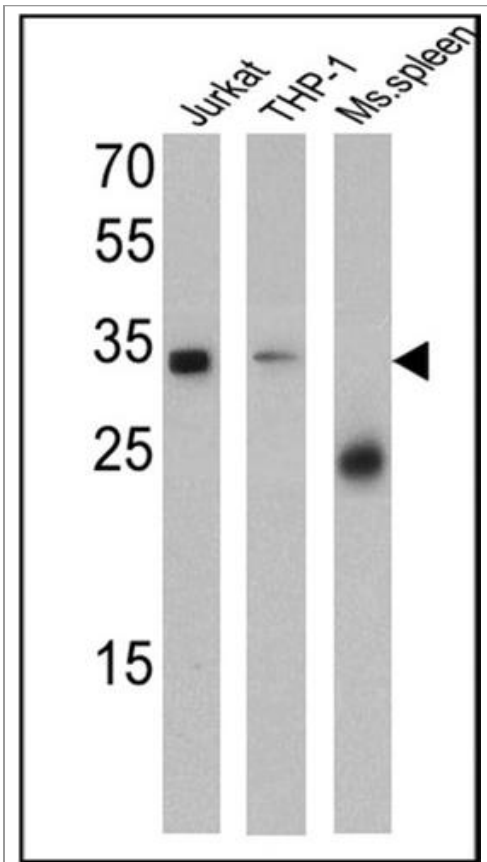
CD99, or MIC2 gene product, or E2 antigen is expressed on the cell membrane of some lymphocytes, cortical thymocytes, and granulosa cells of the ovary. The antigen is also expressed by most pancreatic islet cells, Sertoli cells of the testis, and some endothelial cells. Mature granulocytes express very little or no CD99. MIC2 is strongly expressed on Ewing's sarcoma cells and primitive peripheral neuroectodermal tumors.

This product is for In Vitro experimental use only. Not for resale without express authorization.

Products are warranted to operate or perform substantially in conformance with published Product specifications in effect at the time of sale, as set forth in the Product documentation, specifications and/or accompanying package inserts ("Documentation"). No claim of suitability for use in applications regulated by FDA is made. The warranty provided herein is valid only when used by properly trained individuals. Unless otherwise stated in the Documentation, this warranty is limited to one year from date of shipment when the Product is subjected to normal, proper and intended usage. This warranty does not extend to anyone other than Buyer. Any model or sample furnished to Buyer is merely illustrative of the general type and quality of goods and does not represent that any Product will conform to such model or sample. NO OTHER WARRANTIES, EXPRESS OR IMPLIED, ARE GRANTED, INCLUDING WITHOUT LIMITATION, IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR NON-INFRINGEMENT. BUYER'S EXCLUSIVE REMEDY FOR NON-CONFORMING PRODUCTS DURING THE WARRANTY PERIOD IS LIMITED TO REPAIR, REPLACEMENT OF OR REFUND FOR THE NON-CONFORMING PRODUCT(S), AT SELLER'S SOLE OPTION. THERE IS NO OBLIGATION TO REPAIR, REPLACE OR REFUND FOR PRODUCTS AS THE RESULT OF (I) ACCIDENT, DISASTER OR EVENT OF FORCE MAJEURE, (II) MISUSE, FAULT OR NEGLIGENCE OF OR BY BUYER, (III) USE OF THE PRODUCTS IN A MANNER FOR WHICH THEY WERE NOT DESIGNED, OR (IV) IMPROPER STORAGE AND HANDLING OF THE PRODUCTS. Unless otherwise expressly stated on the Product or in the documentation accompanying the Product, the Product is intended for research only and is not to be used for any other purpose, including without limitation, unauthorized commercial uses, in vitro diagnostic uses, ex vivo or in vivo therapeutic uses, or any type of consumption by or application to humans or animals.

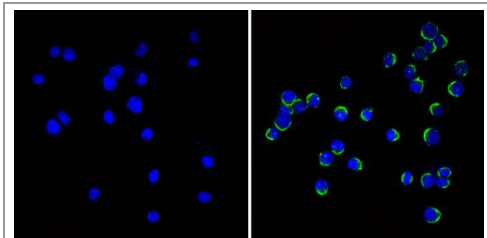
Western Blot with anti-CD99 / MIC2 Monoclonal Antibody [HO36-1.1] (MA5-12954)

Western blot analysis of CD99 was performed by loading 25 ug of Jurkat (Lane 1), THP-1 (Lane 2), and Mouse spleen (Lane 3) cell lysates and a molecular weight protein ladder onto an SDS polyacrylamide gel. Proteins were transferred to a PVDF membrane and blocked with a blocking buffer at 4°C overnight. The membrane was probed with a CD99 monoclonal antibody (Product # MA5-12954) at a dilution of 1:200 (Jurkat and Mouse spleen) and 1:100 (THP-1) overnight at 4°C, washed in TBST, and probed with an HRP-conjugated secondary antibody for 1 hr at room temperature in the dark. Results show a band at 32 kDa in Jurkat and THP-1 cell lysates.



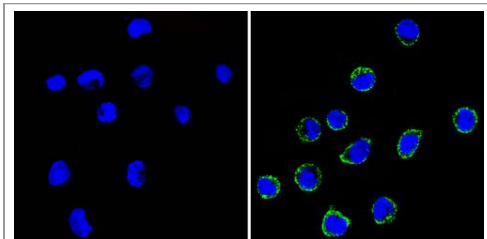
Immunofluorescence with anti-CD99 / MIC2 Monoclonal Antibody [HO36-1.1] (MA5-12954)

Immunofluorescent analysis of CD99 (green) showing staining in the membrane of Jurkat cells (right) compared to a negative control without primary antibody (left). Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with a CD99 monoclonal antibody (Product # MA5-12954) in 3% BSA-PBS at a dilution of 1:20 and incubated overnight at 4°C in a humidified chamber. Cells were washed with PBST and incubated with a DyLight-conjugated secondary antibody in PBS at room temperature in the dark. F-actin (red) was stained with a fluorescent red phalloidin and nuclei (blue) were stained with Hoechst or DAPI. Images were taken at a magnification of 60x.



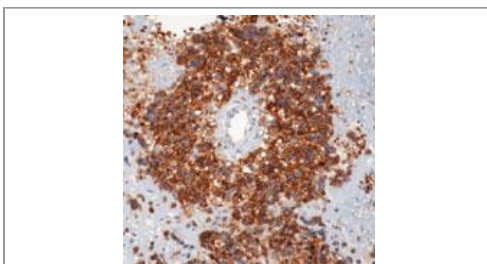
Immunofluorescence with anti-CD99 / MIC2 Monoclonal Antibody [HO36-1.1] (MA5-12954)

Immunofluorescent analysis of CD99 (green) showing staining in the membrane of THP-1 cells (right) compared to a negative control without primary antibody (left). Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with a CD99 monoclonal antibody (Product # MA5-12954) in 3% BSA-PBS at a dilution of 1:20 and incubated overnight at 4°C in a humidified chamber. Cells were washed with PBST and incubated with a DyLight-conjugated secondary antibody in PBS at room temperature in the dark. F-actin (red) was stained with a fluorescent red phalloidin and nuclei (blue) were stained with Hoechst or DAPI. Images were taken at a magnification of 60x.



Immunohistochemistry with anti-CD99 / MIC2 Monoclonal Antibody [HO36-1.1] (MA5-12954)

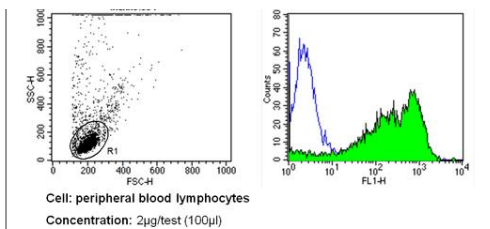
Formalin-fixed, paraffin-embedded human Ewing's sarcoma stained with CD99 antibody using peroxidase-conjugate and DAB chromogen. Note cell membrane staining of tumor cells.



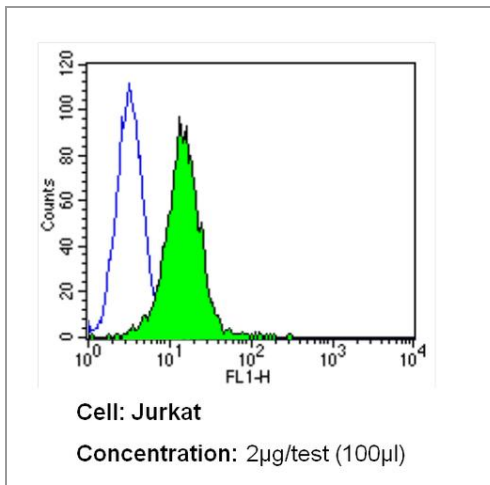
Flow Cytometry with anti-CD99 / MIC2 Monoclonal Antibody [HO36-1.1] (MA5-12954)

This product is for In Vitro experimental use only. Not for resale without express authorization.

Products are warranted to operate or perform substantially in conformance with published Product specifications in effect at the time of sale, as set forth in the Product documentation, specifications and/or accompanying package inserts ("Documentation"). No claim of suitability for use in applications regulated by FDA is made. The warranty provided herein is valid only when used by properly trained individuals. Unless otherwise stated in the Documentation, this warranty is limited to one year from date of shipment when the Product is subjected to normal, proper and intended usage. This warranty does not extend to anyone other than Buyer. Any model or sample furnished to Buyer is merely illustrative of the general type and quality of goods and does not represent that any Product will conform to such model or sample. NO OTHER WARRANTIES, EXPRESS OR IMPLIED, ARE GRANTED, INCLUDING WITHOUT LIMITATION, IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR NON-INFRINGEMENT. BUYER'S EXCLUSIVE REMEDY FOR NON-CONFORMING PRODUCTS DURING THE WARRANTY PERIOD IS LIMITED TO REPAIR, REPLACEMENT OF OR REFUND FOR THE NON-CONFORMING PRODUCT(S) AT SELLER'S SOLE OPTION. THERE IS NO OBLIGATION TO REPAIR, REPLACE OR REFUND FOR PRODUCTS AS THE RESULT OF (I) ACCIDENT, DISASTER OR EVENT OF FORCE MAJEURE, (II) MISUSE, FAULT OR NEGLIGENCE OF OR BY BUYER, (III) USE OF THE PRODUCTS IN A MANNER FOR WHICH THEY WERE NOT DESIGNED, OR (IV) IMPROPER STORAGE AND HANDLING OF THE PRODUCTS. Unless otherwise expressly stated on the Product or in the documentation accompanying the Product, the Product is intended for research only and is not to be used for any other purpose, including without limitation, unauthorized commercial uses, in vitro diagnostic uses, ex vivo or in vivo therapeutic uses, or any type of consumption by or application to humans or animals.



Flow cytometry analysis of CD99 in PBMC cells (green) compared to an isotype control (blue). Human blood was collected, combined with a hydrophilic polysaccharide, centrifuged, transferred to a conical tube and washed with PBS. 50 ul of cell solution was added to each tube at a dilution of 2×10^7 cells/ml, followed by the addition of 50 ul of isotype control and primary antibody (Product # MA5-12954) at a dilution of 2 ug/test. Cells were incubated for 30 min at 4°C and washed with a cell buffer, followed by incubation with a DyLight 488-conjugated secondary antibody for 30 min at 4°C in the dark. FACS analysis was performed using 400 ul of cell buffer.



Flow Cytometry with anti-CD99 / MIC2 Monoclonal Antibody [HO36-1.1] (MA5-12954)

Flow cytometry analysis of CD99 in Jurkat cells (green) compared to an isotype control (blue). Cells were harvested, adjusted to a concentration of $1-5 \times 10^6$ cells/ml, fixed with 2% paraformaldehyde and washed with PBS. Cells were blocked with a 2% solution of BSA-PBS for 30 min at room temperature and incubated with a CD99 monoclonal antibody (Product # MA5-12954) at a dilution of 2 ug/test for 60 min at room temperature. Cells were then incubated for 40 min at room temperature in the dark using a DyLight 488-conjugated secondary antibody and re-suspended in PBS for FACS analysis.

This product is for In Vitro experimental use only. Not for resale without express authorization.

Products are warranted to operate or perform substantially in conformance with published Product specifications in effect at the time of sale, as set forth in the Product documentation, specifications and/or accompanying package inserts ("Documentation"). No claim of suitability for use in applications regulated by FDA is made. The warranty provided herein is valid only when used by properly trained individuals. Unless otherwise stated in the Documentation, this warranty is limited to one year from date of shipment when the Product is subjected to normal, proper and intended usage. This warranty does not extend to anyone other than Buyer. Any model or sample furnished to Buyer is merely illustrative of the general type and quality of goods and does not represent that any Product will conform to such model or sample. NO OTHER WARRANTIES, EXPRESS OR IMPLIED, ARE GRANTED, INCLUDING WITHOUT LIMITATION, IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR NON-INFRINGEMENT. BUYER'S EXCLUSIVE REMEDY FOR NON-CONFORMING PRODUCTS DURING THE WARRANTY PERIOD IS LIMITED TO REPAIR, REPLACEMENT OF OR REFUND FOR THE NON-CONFORMING PRODUCT(S), AT SELLER'S SOLE OPTION. THERE IS NO OBLIGATION TO REPAIR, REPLACE OR REFUND FOR PRODUCTS AS THE RESULT OF (I) ACCIDENT, DISASTER OR EVENT OF FORCE MAJEURE, (II) MISUSE, FAULT OR NEGLIGENCE OF OR BY BUYER, (III) USE OF THE PRODUCTS IN A MANNER FOR WHICH THEY WERE NOT DESIGNED, OR (IV) IMPROPER STORAGE AND HANDLING OF THE PRODUCTS. Unless otherwise expressly stated on the Product or in the documentation accompanying the Product, the Product is intended for research only and is not to be used for any other purpose, including without limitation, unauthorized commercial uses, in vitro diagnostic uses, ex vivo or in vivo therapeutic uses, or any type of consumption by or application to humans or animals.

3 Immunohistochemistry References

Species / Dilution	Summary
Hu / 1:50	<p>MA5-12954 was used in immunohistochemistry to report a clinical case of uterine carcinosarcoma with unique features</p> <hr/> <p>Lung Cancer. 2009 Jun;64(3):371-7. "Uterine carcinosarcoma metastatic to the lung as large-cell neuroendocrine carcinoma with synchronous sarcoid granulomatosis." Author(s): Froio E, D'Adda T, Fellegara G, Martella E, Caruana P, Pruneri G, Pesci A, Rindi G Number of Citations: 1 PubMed Article URL: http://www.ncbi.nlm.nih.gov/pubmed/19111933</p>
Hu / 1:100	<p>MA5-12954 was used in immunohistochemistry to investigate the secretion of anti-diuretic hormone in neuroblastoma</p> <hr/> <p>Endocr Pathol. 2010 Dec;21(4):266-73. "Primary sellar neuroblastoma presenting with syndrome of inappropriate secretion of anti-diuretic hormone." Author(s): Radotra B, Apostolopoulos V, Sandison A, Hatfield EC, Mendoza N, Moss J, Mehta A, Glaser M, Meeran K, Roncaroli F Number of Citations: 1 PubMed Article URL: http://www.ncbi.nlm.nih.gov/pubmed/21053097</p>
Hu / 1:200	<p>MA5-12954 was used in immunohistochemistry to study the morphological and histological features of neurocytomas in extraventricular locations</p> <hr/> <p>Pathology. 2011 Jun;43(4):327-34. "Extraventricular neurocytomas: a morphological and histogenetic consideration. A study of six cases." Author(s): Agarwal S, Sharma MC, Sarkar C, Suri V, Jain A, Sharma MS, Ailawadhi P, Garg A, Mallick S Number of Citations: 0 PubMed Article URL: http://www.ncbi.nlm.nih.gov/pubmed/21532524</p>

This product is for In Vitro experimental use only. Not for resale without express authorization.

Products are warranted to operate or perform substantially in conformance with published Product specifications in effect at the time of sale, as set forth in the Product documentation, specifications and/or accompanying package inserts ("Documentation"). No claim of suitability for use in applications regulated by FDA is made. The warranty provided herein is valid only when used by properly trained individuals. Unless otherwise stated in the Documentation, this warranty is limited to one year from date of shipment when the Product is subjected to normal, proper and intended usage. This warranty does not extend to anyone other than Buyer. Any model or sample furnished to Buyer is merely illustrative of the general type and quality of goods and does not represent that any Product will conform to such model or sample. NO OTHER WARRANTIES, EXPRESS OR IMPLIED, ARE GRANTED, INCLUDING WITHOUT LIMITATION, IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR NON-INFRINGEMENT. BUYER'S EXCLUSIVE REMEDY FOR NON-CONFORMING PRODUCTS DURING THE WARRANTY PERIOD IS LIMITED TO REPAIR, REPLACEMENT OF OR REFUND FOR THE NON-CONFORMING PRODUCT(S), AT SELLER'S SOLE OPTION. THERE IS NO OBLIGATION TO REPAIR, REPLACE OR REFUND FOR PRODUCTS AS THE RESULT OF (I) ACCIDENT, DISASTER OR EVENT OF FORCE MAJEURE, (II) MISUSE, FAULT OR NEGLIGENCE OF OR BY BUYER, (III) USE OF THE PRODUCTS IN A MANNER FOR WHICH THEY WERE NOT DESIGNED, OR (IV) IMPROPER STORAGE AND HANDLING OF THE PRODUCTS. Unless otherwise expressly stated on the Product or in the documentation accompanying the Product, the Product is intended for research only and is not to be used for any other purpose, including without limitation, unauthorized commercial uses, in vitro diagnostic uses, ex vivo or in vivo therapeutic uses, or any type of consumption by or application to humans or animals.