

# CD54 (ICAM-1) Monoclonal Antibody (eBioKAT-1 (KAT-1, KAT1)), Functional Grade, eBioscience™

## Product Details

Size	50 µg
Published Species	Human, Mouse
Host/Isotype	Rat / IgG2a, kappa
Recommended Isotype Control	Rat IgG2a kappa Isotype Control (eBR2a), Functional Grade, eBioscience™
Class	Monoclonal
Type	Antibody
Clone	eBioKAT-1 (KAT-1, KAT1)
Conjugate	Functional Grade
Form	Liquid
Concentration	1 mg/mL
Storage conditions	4° C
RRID	AB_529547

Applications	Tested Dilution	Publications
Western Blot (WB)	-	1 Publication
Immunohistochemistry (IHC)	-	4 Publications
Immunohistochemistry (Frozen) (IHC (F))	Assay-Dependent	-
Immunocytochemistry (ICC/IF)	-	2 Publications
Flow Cytometry (Flow)	0.5 µg/test	1 Publication
Immunoprecipitation (IP)	Assay-Dependent	1 Publication
Neutralization (Neu)	Assay-Dependent	-
Functional Assay (FN)	Assay-Dependent	1 Publication

## Product Specific Information

**Description:** The eBioKAT-1 monoclonal antibody reacts with mouse CD54 (ICAM-1), which is a 95 kDa member of the immunoglobulin superfamily. CD54 is expressed at low levels on leukocytes and high endothelial venules, and expression increases in response to inflammatory cytokines. ICAM-1 binds to LFA-1 and this interaction is required for the transendothelial migration of T cells. ICAM-1-deficient mice are viable, however the migration of leukocytes to sites of inflammation is reduced leading to impaired immune and inflammatory responses. Based on the regulated expression of ICAM-1, it has been suggested that ICAM-1 may increase leukocyte extravasation at sites of inflammation, whereas the constitutively high expression of ICAM-2 mediates leukocyte traffic into non-inflamed tissue. The eBioKAT-1 monoclonal antibody recognizes a different epitope than the YN1/1.7.4 monoclonal antibody.

**Applications Reported:** This eBioKAT-1 (KAT-1, KAT1) antibody has been reported for use in flow cytometric analysis, immunoprecipitation, and immunohistology staining of frozen tissue sections. The KAT-1 monoclonal antibody has also been reported to inhibit the in vivo ICAM-1-mediated migration of leukocytes.

**Applications Tested:** This eBioKAT-1 (KAT-1, KAT1) antibody has been tested by flow cytometric analysis of mouse splenocytes. This can be used at less than or equal to 0.5 µg per test. A test is defined as the amount (µg) of antibody that will stain a cell sample in a final volume of 100 µL. Cell number should be determined empirically but can range from 10<sup>5</sup> to 10<sup>8</sup> cells/test. It is recommended that the antibody be carefully titrated for optimal performance in the assay of interest.

Storage and handling: Use in a sterile environment.

Filtration: 0.2 µm post-manufacturing filtered.

Purity: Greater than 90%, as determined by SDS-PAGE.

Endotoxin Level: Less than 0.001 ng/µg antibody, as determined by LAL assay.

Aggregation: Less than 10%, as determined by HPLC.

Western Blot (1)

<p>Molecular biology of the cell</p> <p><b>c-Met recruits ICAM-1 as a coreceptor to compensate for the loss of CD44 in Cd44 null mice.</b></p> <p>"Published figure using CD54 (ICAM-1) monoclonal antibody (Product # 16-0542-81) in Immunohistochemistry"</p> <p>Authors: Olaku V,Matzke A,Mitchell C,Hasenauer S,Sakkaravarthi A,Pace G,Ponta H,Orian-Rousseau V</p>	<p>Year 2011</p> <p>Species Mouse</p>
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Immunohistochemistry (4)

<p>Science advances</p> <p><b>Spatially targeted brain cancer immunotherapy with closed-loop controlled focused ultrasound and immune checkpoint blockade.</b></p> <p>"Published figure using CD54 (ICAM-1) monoclonal antibody (Product # 16-0542-81) in Immunohistochemistry"</p> <p>Authors: Lee H,Guo Y,Ross JL,Schoen S,Degertekin FL,Arvanitis C</p>	<p>Year 2022</p>
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<p>Molecules (Basel, Switzerland)</p> <p><b>Effects of Grape Polyphenols on the Life Span and Neuroinflammatory Alterations Related to Neurodegenerative Parkinson Disease-Like Disturbances in Mice.</b></p> <p>"Published figure using CD54 (ICAM-1) monoclonal antibody (Product # 16-0542-81) in Immunohistochemistry"</p> <p>Authors: Tikhonova MA,Tikhonova NG,Tenditnik MV,Ovsyukova MV,Akopyan AA,Dubrovina NI,Amstislavskaya TG,Khlestkina EK</p>	<p>Year 2020</p>
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[View more IHC references on thermofisher.com](#)

Immunocytochemistry (2)

<p>International journal of molecular sciences</p> <p><b>Thrombin Inhibition Prevents Endothelial Dysfunction and Reverses 20-HETE Overproduction without Affecting Blood Pressure in Angiotensin II-Induced Hypertension in Mice.</b></p> <p>"Published figure using CD54 (ICAM-1) monoclonal antibody (Product # 16-0542-81) in Immunocytochemistry"</p> <p>Authors: Kij A,Bar A,Przyborowski K,Proniewski B,Mateuszuk L,Jaształ A,Kieronska-Rudek A,Marczyk B,Matyjaszczyk-Gwarda K,Tworzydło A,Enggaard C,Hansen PBL,Jensen B,Walczak M,Chlopicki S</p>	<p>Year 2021</p>
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- Flow (1)
- IP (1)
- FN (1)

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