Purified anti-mouse/human CD324 (E-Cadherin) Antibody

Catalog# / Size	147301 / 25 µg 147302 / 100 µg
Clone	DECMA-1
Regulatory Status	RUO
Other Names	E-Cadherin, Cadherin-1, CDH1, and UVO
Isotype	Rat IgG1, κ
Description	CD324, also known as E-cadherin, cadherin-1, CDH1, and UVO is a member of the cadherin superfamily. It is a calcium-dependent, transmembrane cell-cell adhesion glycoprotein composed of four extracellular cadherin repeats and a highly conserved cytoplasmic tail region. CD324 is widely expressed in epithelial cells in the colon, uterus, liver, keratinocytes, brain, heart, muscle, kidney, and pancreas as well as erythroid cells. CD324 functions as a cell adhesion molecule involved in development, bacterial pathogenesis, and tumor invasion. In bacterial pathogenesis, the ectodomain of CD324 mediates bacterial adhesion to mammalian cells, while the cytoplasmic domain is required for internalization. CD324 binds to the αEβ7 integrin to mediate cell adhesion and also interacts with a number of intracellular proteins including including erbin, ezrin, caspase-3, caspase-8, β-catenin, presenilin 1, and casein kinase II as well as other extracellular proteins including the EGF receptor.

Product Details

Verified Reactivity	Mouse, Human
Reported Reactivity	Cynomolgus, Dog, Pig
Antibody Type	Monoclonal
Host Species	Rat
Immunogen	E-Cadherin extracellular domain
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.
Preparation	The antibody was purified by affinity chromatography.
Concentration	0.5 mg/ml
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C.
Application	FC - *Quality tested* ICC - *Verified* IP, WB, FA - *Reported in the literature, not verified in house*
Recommended Usage	Each lot of this antibody is quality control tested by immunofluorescent staining with flow cytometric analysis. For flow cytometric staining, the suggested use of this reagent is ≤ 1.0 µg per million cells in 100 µl volume. It is recommended that the reagent be titrated for optimal performance for each application.
Application Notes	Additional reported applications (for relevant formats) include: immunoprecipitation[1], Western Blotting[1], immunomicroscopy[3], biological function[1,2], and spatial biology (IBEX)[4,5].

Application References

(PubMed link indicates BioLegend citation)

1. Vestweber D, *et al.* 1985. *EMBO.* 4:3393. (IP, WB, FA)
2. Nakagawa M, *et al.* 2001. *J. Cell Sci.* 114:1829. (FA in canine cells)
3. Mohamet L, *et al.* 2010. *PLoS ONE.* 5:e12921. (IF)
4. Radtke AJ, *et al.* 2020. *Proc Natl Acad Sci U S A.* 117:33455-65. (SB) PubMed
5. Radtke AJ, *et al.* 2022. *Nat Protoc.* 17:378-401. (SB) PubMed

Product Citations

1. Wiesner DL, *et al.* 2020. Cell Host Microbe. 614:27. PubMed
2. Tanaka HY, *et al.* 2020. Biomaterials. 251:120077. PubMed
3. Kida T, *et al.* 2018. Am J Physiol Lung Cell Mol Physiol. 314:L473. PubMed

4. Foster DS, *et al.* 2020. Nat Commun. 3.278472222. PubMed
5. Du J, *et al.* 2019. Cell Syst. 0.523611111. PubMed

RRID

AB_2563037 (BioLegend Cat. No. 147301)
AB_2563038 (BioLegend Cat. No. 147302)

Antigen Details

Structure

Member of the cadherin superfamily. Calcium-dependent, transmembrane cell-cell adhesion glycoprotein composed of four extracellular cadherin repeats and a highly conserved cytoplasmic tail region.

Distribution

Widely expressed in epithelial cells in the colon, uterus, liver, keratinocytes, brain, heart, muscle, kidney, and pancreas as well as erythroid cells.

Function

Cell adhesion molecule involved in development, bacterial pathogenesis, and tumor invasion. The ectodomain of CD324 mediates bacterial adhesion to mammalian cells, while the cytoplasmic domain is required for internalization.

Interaction

Interacts with a variety of proteins including erbin, ezrin, caspase-3, caspase-8, EGF receptor, β-catenin, presenilin 1, casein kinase II, and others.

Ligand/Receptor

αEβ7 integrin.

Cell Type

Embryonic Stem Cells

Biology Area

Cell Adhesion, Cell Biology, Immunology, Innate Immunity, Neuroscience, Stem Cells, Synaptic Biology

Molecular Family

Adhesion Molecules, CD Molecules

Antigen References

1. Overduin M, *et al.* 1995. *Science* 267:386.
2. Boggon TJ, *et al.* 2002. *Science* 296:1308.
3. Berx G, *et al.* 1995. *EMBO J.* 14:6107.
4. Perl AK, *et al.* 1998. *Nature* 392:190.

Gene ID

999

12550

Related Protocols

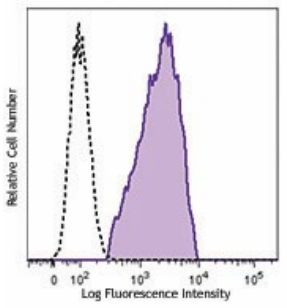
Cell Surface Flow Cytometry Staining Protocol

Immunocytochemistry Staining Protocol

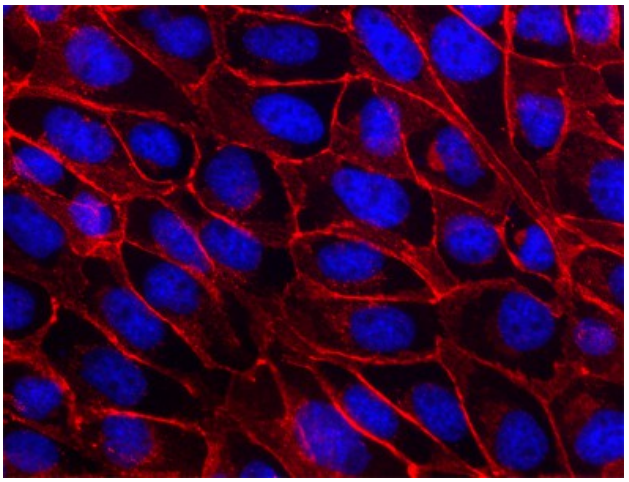
Other Formats

Purified anti-mouse/human CD324 (E-Cadherin), PE anti-mouse/human CD324 (E-Cadherin), Alexa Fluor® 594 anti-mouse/human CD324 (E-Cadherin), Alexa Fluor® 647 anti-mouse/human CD324 (E-Cadherin), PE/Cyanine7 anti-mouse/human CD324 (E-Cadherin), PE/Dazzle™ 594 anti-mouse/human CD324 (E-Cadherin), PerCP/Cyanine5.5 anti-mouse/human CD324 (E-Cadherin), APC anti-mouse/human CD324 (E-Cadherin), Brilliant Violet 421™ anti-mouse/human CD324 (E-Cadherin), APC/Fire™ 750 anti-mouse/human CD324 (E-Cadherin)

Product Data



MDCK epithelial cell line was stained with purified CD324 (clone DECMA-1, filled histogram) or purified rat IgG1, κ isotype control (open histogram), followed by anti-rat IgG PE.



Canine kidney cell line MDCK was cultured in a chamber slide till confluent. The cells were fixed with 1% paraformaldehyde (PFA) for 10 minutes, permeabilized with 0.5% Triton X-100 for 10 minutes, and blocked with 5% FBS for 30 minutes. Then cells were intracellularly stained with purified 2.5 µg/ml of CD324 (E-Cadherin, clone DECMA-1) in blocking buffer overnight at 4°C followed by 2.5 µg/ml of DyLight™ 594 Goat anti-rat IgG (minimal x-reactivity) incubation for 1 hour at 4°C. Nuclei were counterstained with DAPI and are shown in blue. The image was captured with 40X objective.

BioLegend Inc., 8999 BioLegend Way, San Diego, CA 92121 www.biolegend.com
Toll-Free Phone: 1-877-Bio-Legend (246-5343) Phone: (858) 768-5800 Fax: (877) 455-9587