BD CD9 (M-L13)

Monoclonal Antibodies Detecting Human Antigens

Form	Catalog number	Form	Catalog number
FITC	341646	APC	341648
PE	341647	APC-H7	655409
PerCP-Cy5.5	341649	V450	658167

Product availability varies by region. Contact BD Biosciences Customer Support or your local sales representative for information.

Research Applications

Research applications include:

- Characterization of leukemias and lymphomas[1-3]
- Analysis of hematopoiesis[4]
- Investigation of T-cell activation and apoptosis[5]
- Detection of platelet activation and aggregation[1,6-8]

Description

Specificity

The CD9 antibody recognizes a 24-kilodalton (kDa) cell surface glycoprotein[9-13] belonging to the tetraspanin family.[1] The CD9 antigen is also known as p24, tetraspanin-29 (Tspan-29), motility-related protein-1 (MRP-1), and leucocyte antigen MIC3.[14]

Antigen distribution

The CD9 antigen has a very broad tissue distribution. It is present on basophils, eosinophils, monocytes, pre-B cells, B cells, and various leukemic cell lines (erythroid, myeloid, some T lymphoid, and pre-B lymphoid). It is also found on follicular center cells, sinus histiocytes, macrophages, Kupffer cells, osteoclasts, hepatocytes, bile duct endothelia, renal glomeruli, proximal and distal tubuli, epithelia (intercellular spinous spaces) of skin and mucosa, fibroblasts, connective tissues, endothelia, smooth muscle, cardiac muscle, synovial lining cells, brain white matter, and peripheral nerves.[9-13]

The CD9 antibody provides a co-stimulatory signal to T cells, resulting in a transient activation followed by apoptosis.[5] The CD9 antibody activates platelets, inducing mitogenesis, aggregation,[1,6-8] and p72syk kinase activity.[15] The CD9 antigen associates with integrins and can modulate integrin signaling, cell migration, and cell adhesion.[1,5,9-13,16]

Clone

The CD9 antibody, clone M-L13,[6,7] is derived from the hybridization of mouse myeloma cells with spleen cells isolated from mice immunized with common acute lymphoblastic leukemia (cALL) cells.

Composition

The CD9 antibody is composed of mouse IgG_1 heavy chains and kappa light chains.

For Research Use Only. Not for use in diagnostic or therapeutic procedures.

Product configuration

The following are supplied in buffer containing a stabilizer and a preservative.

Form	Number of tests	Volume per test (µL)	Amount provided (µg)	Total volume (mL)	Concentration (µg/mL)	Stabilizer	Preservative
FITC	50	20	25	1.0	25	Gelatin	0.1% Sodium azide
PE	50	20	25	1.0	25	Gelatin	0.1% Sodium azide
PerCP-Cy5.5	50	20	25	1.0	25	Gelatin	0.1% Sodium azide
APC	100	5	50	0.5	100	Gelatin	0.1% Sodium azide
APC-H7	100	5	50	0.5	100	BSA	CMIT/MIT (3:1)
V450[a]	100	5	50	0.5	100	Gelatin	0.1% Sodium azide

[a] BD Horizon™ V450

CAUTION Some APC-H7 conjugates show changes in their emission spectra with prolonged exposure to paraformaldehyde or light. For overnight storage of stained cells, wash and resuspend in buffer without paraformaldehyde after 1 hour of fixation.

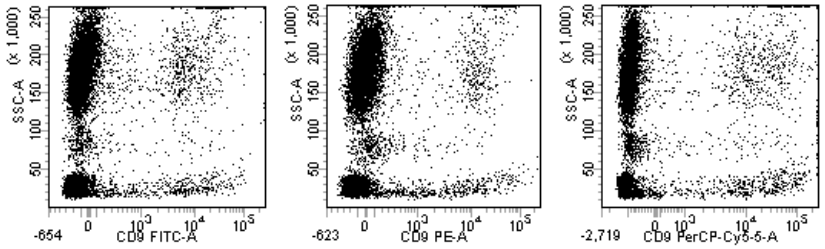
CAUTION Prolonged exposure of cells to paraformaldehyde can lead to increased autofluorescence in the violet channels. For overnight storage of stained cells, wash and resuspend in buffer without paraformaldehyde after 1 hour of fixation.

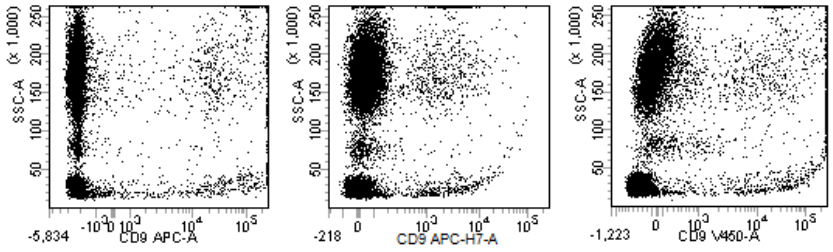
Procedure

Go to our website (bdbiosciences.com) or contact your local BD representative for the lyse/wash protocol for direct immunofluorescence.

Representative Data

Flow cytometric analysis was performed on whole blood stained with the indicated conjugated antibody and gated on lymphocytes. Laser excitation was at 405 nm, 488 nm, or 635 nm. Representative data analyzed with a BD flow cytometer is shown in the following plots.





Handling and Storage

Store vials at 2–8 °C. Conjugated forms should not be frozen. Protect from exposure to light. Each reagent is stable until the expiration date shown on the bottle label when stored as directed.

Warning

All biological specimens and materials coming in contact with them are considered biohazards. Handle as if capable of transmitting infection[17,18] and dispose of with proper precautions in accordance with federal, state, and local regulations. Never pipette by mouth. Wear suitable protective clothing, eyewear, and gloves.

The APC-H7 conjugate contains a mixture of 0.00236% 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-2H -isothiazol-3-one [CMIT/MIT (3:1)], CAS number 55965-84-9; 5-chloro-2-methyl-4-isothiazolin-3-one [EC number 247-500-7] and 2-methyl-4-isothiazolin-3-one [EC number 220-239-6] (3:1). These reagents are classified as hazardous according to the Globally Harmonized System of Classification and Labelling of Chemicals (GHS).

	Warning
	H317: May cause an allergic skin reaction.
Prevention	P261: Avoid breathing dust/fume/gas/mist/vapors/spray. P272: Contaminated work clothing should not be allowed out of the workplace. P280: Wear protective gloves/protective clothing/eye protection/face protection.
Response	P302+P352: IF ON SKIN: Wash with plenty of water. P333+P313: If skin irritation or rash occurs: Get medical advice/attention. P362+P364: Take off contaminated clothing and wash it before reuse.
Disposal	P501: Dispose of contents/container to an approved facility in accordance with local, regional, national and international regulations.

Go to regdocs.bd.com to download the Safety Data Sheet.

Characterization

To ensure consistently high-quality reagents, each lot of antibody is tested for conformance with characteristics of a standard reagent.

Warranty

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