

## ProteinFind® Anti-CD9 Mouse Monoclonal Antibody

Please read the datasheet carefully prior to use.

**Cat. No.** HE901

**Version No.** Version 2.0

**Storage:** PBS (pH7.4), 0.05% ProClin 300, 50% Glycerol; at -20°C for two years, avoid repeated freeze-thawing.

### Description

CD9 belongs to the tetraspanin family of cell surface glycoprotein. CD9 is expressed on developing B lymphocytes, platelets, monocytes, eosinophils, basophils, stimulated T lymphocytes, and the surface of neurons and glial cells in the peripheral nervous system<sup>[1-3]</sup>. In myoblasts, CD9 acts synergistically with CD81 and PTGFRN to inhibit muscle tube fusion during muscle regeneration. In macrophages, CD9 acts synergistically with CD81,  $\beta$ -1 and  $\beta$ -2 integrins to prevents macrophages from fusing into multinucleated giant cells<sup>[4]</sup>. CD9 also plays an important role in many cell physiological processes, including differentiation, adhesion and signal transduction. And it plays a key role in inhibiting the movement and metastasis of cancer cells<sup>[5, 6]</sup>. This product is the mouse anti-human CD9 monoclonal antibody, which is used for the specific detection of human CD9 by IF and FC.

**Species Reactivity:** Human

**Clone Number:** Trans-1B1

**Antibody Subtype:** Mouse IgG1

### Immunogen

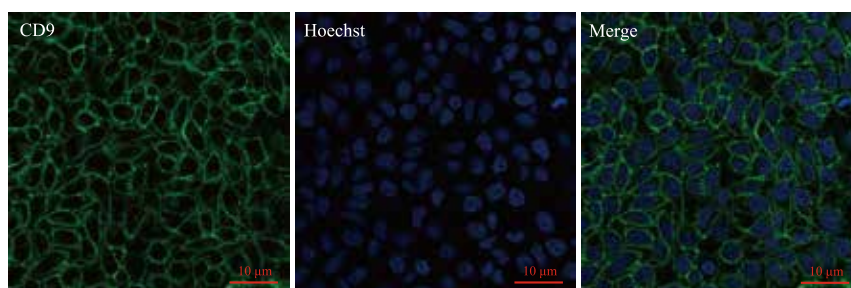
- Recombinant human CD9 partial extracellular domain
- Entrez Gene ID: 928
- UniProt ID: P21926

### Applicable Experiments and Dilution

- IF: 1:100 dilution is recommended.
- FC: 1:100-1:800 dilution is recommended.

**Positive Control Cell Line:** HeLa cells

★ **Advanced Validation:** The antibody was validated by the relative expression of protein levels in different cell lines.

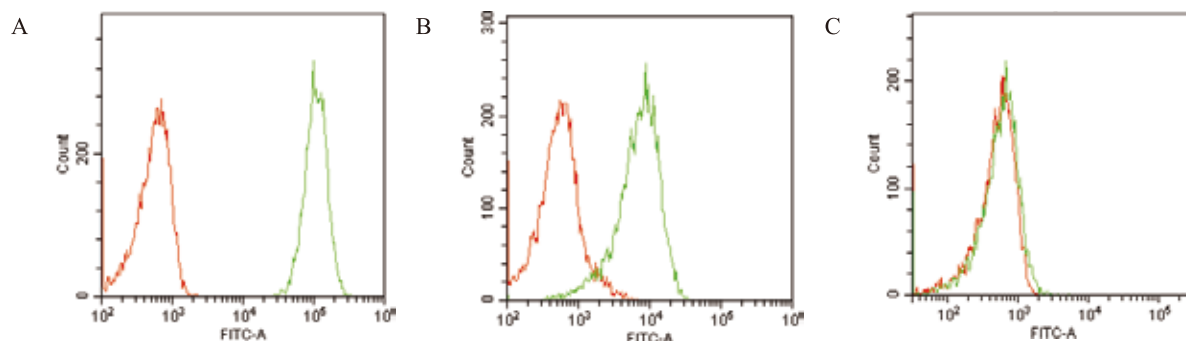


IF: ProteinFind® Anti-CD9 Mouse Monoclonal Antibody (green) for detection of CD9 localization in HeLa cells.

Hoechst is used to label the nucleus (blue).

Dilution ratio of primary antibody: 1:100





FC: *ProteinFind*<sup>®</sup> Anti-CD9 Mouse Monoclonal Antibody (green) for FC detection of HeLa cells (positive cells) (figure A), K-562 cells (positive cells) (figure B) and Raji cells (negative cells) (figure C).

Negative control: Mouse IgG1 Isotype Control (red)

Dilution ratio of primary antibody: 1:100

## References

- [1] Reyes R, Cardeñes B, Machado-Pineda Y, et al. Tetraspanin CD9: A Key Regulator of Cell Adhesion in the Immune System [J]. *Front Immunol.* 2018, 9: 863.
- [2] Jennings LK, Crossno JT Jr, Fox CF, et al. Platelet p24/CD9, a member of the tetraspanin family of proteins [J]. *Ann N Y Acad Sci.* 1994, 714(1): 175-84.
- [3] Nakamura Y, Iwamoto R, Mekada E. Expression and distribution of CD9 in myelin of the central and peripheral nervous systems [J]. *Am J Pathol.* 1996, 149(2): 575-83.
- [4] Takeda Y, Tachibana I, Miyado K, et al. Tetraspanins CD9 and CD81 function to prevent the fusion of mononuclear phagocytes [J]. *Journal of Cell Biology.* 2003, 161(5): 945-56.
- [5] Ikeyama S, Koyama M, Yamaoko M, et al. Suppression of cell motility and metastasis by transfection with human motility-related protein (MRP-1/CD9) DNA [J]. *J Exp Med.* 1993, 177(5): 1231-7.
- [6] Masellis-Smith A, Shaw AR. CD9-regulated adhesion. Anti-CD9 monoclonal antibody induce pre-B cell adhesion to bone marrow fibroblasts through de novo recognition of fibronectin [J]. *J Immunol.* 1994, 152(6): 2768-77.

**For research use only, not for clinical diagnosis.**

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