

## PRODUCT INFORMATION SHEET

### Monoclonal antibodies detecting human antigens

#### CD9

PURE	<span style="border: 1px solid black; padding: 2px;">RUO</span>	<span style="border: 1px solid black; padding: 2px;">REF</span>	IQP-638P	▽ 100 test
FITC	<span style="border: 1px solid black; padding: 2px;">RUO</span>	<span style="border: 1px solid black; padding: 2px;">REF</span>	IQP-638F	▽ 100 test
R-PE	<span style="border: 1px solid black; padding: 2px;">RUO</span>	<span style="border: 1px solid black; padding: 2px;">REF</span>	IQP-638R	▽ 100 test
APC	<span style="border: 1px solid black; padding: 2px;">RUO</span>	<span style="border: 1px solid black; padding: 2px;">REF</span>	IQP-638A	▽ 100 test

RUO **For Research Use Only**



#### Description

##### Clone

MEM-61

##### Isotype

Murine IgG1

##### Specificity

The antibody MEM-61 recognizes an epitope on second extracellular domain (EC2) of CD9 antigen, a 24 kDa transmembrane protein expressed on platelets, monocytes, pre-B lymphocytes, granulocytes and activated T lymphocytes.

##### Species

Human

##### Immunogen

Pre-B cell line NALM-6.

##### Summary

CD9 belongs to proteins of tetraspanin family that orchestrate cholesterol-associated tetraspanin-enriched signaling microdomains within the plasma membrane, forming complexes with each other as well as with integrins, membrane-anchored growth factors and other proteins. CD9 is involved in cell motility, osteoclastogenesis, neurite outgrowth, myotube formation, and sperm-egg fusion, plays roles in cell attachment and proliferation and is necessary for association of heterologous MHC II molecules on the dendritic cell plasma membrane which is important for effective T cell stimulation. CD9 is also considered as metastasis suppressor in solid tumors.

##### Applications

FC, WB, IHC(P), MC, FUNC. Determining optimal working dilutions by titration test.

##### Limitations

1. Conjugates with brighter fluorochromes, like PE and APC, will have a greater separation than those with dyes like FITC and CyQ. When populations overlap, the percentage of positive cells using a selected marker can be affected by the choice of fluorescent label.
2. Use of monoclonal antibodies in patient treatment can interfere with antigen target recognition by this reagent. This should be taken into account when samples are analyzed from patients treated in this fashion. IQ Products has not characterized the effect of the presence of therapeutic antibodies on the performance of this reagent.
3. Reagents can be used in different combinations, therefore laboratories need to become familiar performance characteristics of each antibody in relation with the combined markers in normal and abnormal samples.
4. Reagent performance can be affected by the use of anticoagulants.



#### Handling and Storage

Antibodies are supplied in azide free phosphate buffered saline (PBS), approx. pH 7.4; 0.2 µm filter sterilized.. Store the vials at 2-8°C. Monoclonal antibodies should be protected from prolonged exposure to light when conjugated with fluorochromes. Reagents are stable for the period shown on the vial label when stored properly.

#### Warranty

Products sold hereunder are warranted only to conform to the quantity and contents stated on the label at the time of delivery to the customer. There are no warranties, expressed or implied, which extend beyond the description on the label of the product. IQ Products is not liable for property damage, personal injury, or economic loss caused by the product.

## Characterization

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

## Warning

All products contain sodiumazide. This chemical is poisonous and hazardous. Handling should be done by trained staff only.

## References

1. Saito Y, Tachibana I, Takeda Y, Yamane H, He P, Suzuki M, Minami S, Kijima T, Yoshida M, Kumagai T, Osaki T, Kawase I. Absence of CD9 enhances adhesion-dependent morphologic differentiation, survival, and matrix metalloproteinase-2 production in small cell lung cancer cells. *Cancer Res.* 2006 Oct 1;66(19):9557-65.
2. Israels SJ, McMillan-Ward EM: Platelet tetraspanin complexes and their association with lipid rafts. *Thromb Haemost.* 2007 Nov;98(5):1081-7.
3. Kim YJ, Yu JM, Joo HJ, Kim HK, Cho HH, Bae YC, Jung JS: Role of CD9 in proliferation and proangiogenic action of human adipose-derived mesenchymal stem cells. *Pflugers Arch.* 2007 Nov;455(2):283-96.
4. Unternaehrer JJ, Chow A, Pypaert M, Inaba K, Mellman I: The tetraspanin CD9 mediates lateral association of MHC class II molecules on the dendritic cell surface. *Proc Natl Acad Sci U S A.* 2007 Jan 2;104(1):234-9.
5. Leukocyte Typing VI., Kishimoto T. et al. (Eds.), Garland Publishing Inc. (1997).
6. Lafleur MA, Xu D, Hemler ME: Tetraspanin proteins regulate membrane type-1 matrix metalloproteinase-dependent pericellular proteolysis. *Mol Biol Cell.* 2009 Apr;20(7):2030-40.
7. Singh AB, Sugimoto K, Dhawan P, Harris RC: Juxtacrine activation of EGFR regulates claudin expression and increases transepithelial resistance. *Am J Physiol Cell Physiol.* 2007 Nov;293(5):C1660-8.
8. Stöckl J, Majdic O, Fischer G, Maurer D, Knapp W: Monomorphic molecules function as additional recognition structures on haptenated target cells for HLA-A1-restricted, hapten-specific CTL. *J Immunol.* 2001 Sep 1;167(5):2724-33.

## Explanation of used symbols



Consult instructions for use  
Catalogue number  
Sufficient for  
Caution, consult accompanying document  
Keep away from (sun)light  
Biological risks  
Temperature limitation (°C)  
For Research Use Only  
Batch code  
Use by yyyy-mm-dd  
Manufacturer

 **Products**  
bright fluorescence

		<b>Label - tandem</b>	<b>Ex -max (nm)</b>	<b>Em -max (nm)</b>
P	PURE	purified material	-	-
F	FITC	FITC	488	519
R	R-PE	PE	488, 532	578
C	CyQ	PE-Cy5.18	488, 532	667
A	APC		595, 633, 635, 647	660
PC	PerCP		488, 532	678
PCC	PerCP-Cy5.5		488, 532	695



IQ Products BV  
Rozenburglaan 13a  
9727 DL Groningen, The Netherlands

+31 (0)50 57 57 000  
+31 (0)50 57 57 002  
Technical [marketing@iqproducts.nl](mailto:marketing@iqproducts.nl)  
Orders [orders@iqproducts.nl](mailto:orders@iqproducts.nl)  
[www.iqproducts.nl](http://www.iqproducts.nl)