Data Sheet (Cat.No.TMPY-07049)

CD9 Protein-Nanodisc, Human, Recombinant (His & GFP)

General Information

Synonyms:	TSPAN-29;DRAP-27;TSPAN29;MIC3;BTCC-1;P24;MRP-1;GIG2;BA2
Protein Construction:	A DNA sequence encoding the Human CD9 (P21926) (Met1-Val228) was expressed with a N-terminal polyhistidine tag followed by a GFP Tag. Nanodisc is a versatile tool for studying membrane proteins. Using styrene-maleic acid (SMA) copolymer, membrane proteins can be extracted directly from prokaryotic and eukaryotic expression systems in the absence of detergents to preserve the protein structure and function better. Compared to membrane scaffold proteins (MSPs) nanodiscs, SMA nanodiscs also have the advantage of preserving proteins' nature by maintaining native lipids surrounded without introducing any heterologous proteins, which allows studies of protein structure and functions in a native-like environment.
Species:	Human
Expression Host:	HEK293 Cells
Accession:	P21926
Molecular Weight:	53.68 kDa (predicted); 51.3 kDa (reducing contition)

QC Testing

Biological Activity:	Immobilized CD9 Protein-Nanodisc, Human, Recombinant (His & GFP) (Cat#TMPY-07049) at 5 μg/mL (100 μL/well) can bind Anti-CD9 Monoclonal Antibody, the EC50 is 4-30 ng/mL.
Purity:	≥ 80% as determined by SDS-PAGE.
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Supplied as sterile 10 mM Hepes, 50 mM NaCl, pH 7.5. Please contact us for any concerns or special requirements. Please refer to the specific buffer information in the hardcopy of datasheet or the lot-specific COA.

Preparation and Storage

Stability & Storage:

Samples are stable for up to twelve months from date of receipt at -70℃. Store it under sterile conditions at -70℃ or lower. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Actual storage temperature shall be subject to the COA.

Shipping:

Proteins are shipped with blue ice.

Protein Background

The cluster of differentiation (CD) system is commonly used as cell markers in Immunophenotyping. Different kinds of cells in the immune system can be identified through the surface CD molecules associating with the immune function of the cell. There are more than 320 CD unique clusters and subclusters have been identified. Some of the

CD molecules serve as receptors or ligands important to the cell through initiating a signal cascade which then alter the behavior of the cell. Some CD proteins do not take part in cell signal process but have other functions such as cell adhesion. CD9 is a member of the transmembrane 4 superfamily, which is also known as the tetraspanin family. CD9 is a cell surface glycoprotein with 4 hydrophobic domains that are described as complex with integrins and other transmembrane 4 superfamily members. It is found expressed on the surface of the exosomes. The protein takes part in cellular signal transduction events and thus play a role in the regulation of cell development and activation, growth and motility. Besides, CD9 seems to be a key role in the egg-sperm fusion during the mammalian fertilization processes. CD9 is found on the membrane of the oocytes and also appears to intervene in maintaining the normal shape of oocyte microvilli.

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