

CD9 Protein, Human, Recombinant (His)

General Information

Synonyms:	BTCC-1;DRAP-27;TSPAN29;MRP-1;CD9 molecule;MIC3;TSPAN-29
Protein Construction:	A DNA sequence encoding the second extracellular domain (Ser 112-Ile 195) of human CD9 (NP_001760.1) was fused with a polyhistidine tag at the C-terminus and a signal peptide at the N-terminus. Predicted N terminal: Ser 112
Species:	Human
Expression Host:	HEK293 Cells
Accession:	P21926
Molecular Weight:	11 kDa (predicted); 11 kDa (reducing conditions)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 95 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/µg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 µm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:	Reconstituted with sterile deionized water to 0.25 mg/mL. Reconstitution conditions may vary depending on the lot.
Stability & Storage:	It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots. <small>Actual storage temperature shall be subject to the COA.</small>

Shipping:	In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.
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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.

Reference

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