

CD9 Protein, Mouse (Cell-Free, His)

Cat. No.:	HY-P702243
Synonyms:	CD9 antigen
Species:	Mouse
Source:	E. coli Cell-free
Accession:	P40240 (M1-V226)
Gene ID:	12527
Molecular Weight:	28.1 kDa

PROPERTIES

AA Sequence	<pre> MPVKGGSKCI KYLLFGFNFI FWLAGIAVLA IGLWLRFDSQ TKSIFEQENN HSSFYTGVI LIGAGALMML VGFLGCCGAV QESQCLGLF FGFLLVIFA EIAAAVWGYT HKDEVIKELQ EFYKDTYQKL RSKDEPQRET LKA IHMALDC CGIAGPLEQF ISDTCPPKQL LESFQVKPCP EAISEVFNNK FHIIGAVGIG IAVVMIFGMI FSMILCCAIR RSREMV </pre>
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.22 µm filtered solution of Tris/PBS-based buffer, 6% Trehalose, pH 8.0.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH ₂ O. For long term storage it is recommended to add 5-50% of glycerol (final concentration). Our default final concentration of glycerol is 50%. Customers could use it as reference.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	The CD9 protein, an integral membrane protein associated with integrins, plays a pivotal role in regulating various processes, including sperm-egg fusion, platelet activation and aggregation, and cell adhesion. It is prominently present on the cell surface of oocytes, where it assumes a key role in sperm-egg fusion, potentially by orchestrating multiprotein complexes and influencing membrane morphology essential for the fusion process. In myoblasts, CD9 associates with CD81 and PTGFRN, acting as an inhibitor of myotube fusion during muscle regeneration. Within macrophages, CD9 forms
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associations with CD9 and beta-1 and beta-2 integrins, preventing macrophage fusion into multinucleated giant cells specialized in ingesting complement-opsonized large particles and impeding the fusion between mononuclear cell progenitors into osteoclasts responsible for bone resorption. CD9 also acts as a receptor for PSG17 and is involved in platelet activation and aggregation, regulating paranodal junction formation. Its role extends to cell adhesion, cell motility, and tumor metastasis, particularly influencing integrin-dependent migration of macrophages, a critical aspect of the inflammatory response in the lung. CD9 forms disulfide-linked homodimers, higher homooligomers, and heterooligomers with other tetraspanin family members. It interacts with integrins ITGAV:ITGB3 and ITGA6:ITGB1, forming complexes with CD81, beta-1, and beta-2 integrins, CD63, CR2/CD21, PTGFRN/CD9P1, and IGSF8, the latter interaction being direct. Additionally, CD9's interaction with PDPN is homophilic and attenuates platelet aggregation and pulmonary metastasis induced by PDPN.

Caution: Product has not been fully validated for medical applications. For research use only.

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