CD9 Protein, Human (HEK293, His)

Cat. No.:	HY-P72701
Synonyms:	CD9 antigen; MIC3; TSPAN29; DRAP-27; MRP1; BTCC1; CD9
Species:	Human
Source:	HEK293
Accession:	P21926 (S112-I195)
Gene ID:	928
Molecular Weight:	Approximately 10 kDa

PROPERTIES

AA Sequence	S H K D E V I K E V Q E F Y K D T Y N K L K T K D E P Q R E T L K A I H Y A L N C C G L A G G V E Q F I S D I C P K K D V L E T F T V K S C P D A I K E V F D N K F H I
Biological Activity	Data is not available.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μm filtered solution of PBS, pH 7.4.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O.
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	CD9, an integral membrane protein, plays a pivotal role in regulating various biological processes, including sperm-egg fusion, platelet activation and aggregation, and cell adhesion. Located at the cell surface of oocytes, CD9 is essential for sperm-egg fusion, potentially by orchestrating multiprotein complexes and membrane morphology required for the fusion process. In myoblasts, CD9 associates with CD81 and PTGFRN, inhibiting myotube fusion during muscle regeneration. Within macrophages, CD9 forms associations with CD81 and beta-1/beta-2 integrins, preventing macrophage fusion into multinucleated giant cells specialized in ingesting complement-opsonized large particles. CD9 also hinders the fusion of mononuclear cell progenitors into osteoclasts responsible for bone resorption. Beyond its role in fusion events, CD9 acts as a receptor for PSG17 and is implicated in platelet activation, aggregation, paranodal junction formation, cell adhesion, cell

	motility, and tumor metastasis. CD9 forms disulfide-linked homodimers and higher homooligomers, as well as heterooligomers with other tetraspanin family members. It interacts with integrins ITGAV:ITGB3 and ITGA6:ITGB1, and is part of integrin-tetraspanin complexes in the membrane of monocytes/macrophages. CD9 forms complexes with CD63, PTGFRN, IGSF8, CR2/CD21, and PDPN, playing a crucial role in diverse cellular functions and interactions in various contexts.

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