

DESCRIPTION

Source	Human embryonic kidney cell, HEK293-derived human CD82/Kai-1 protein			
	MD	Human IgG ₁ (Pro100-Lys330)	IEGR	Human CD82 (Gly103-Gln225) Accession # P27701
	N-terminus			C-terminus
N-terminal Sequence	Met			
Analysis				
Structure / Form	Disulfide-linked homodimer			
Predicted Molecular Mass	40.7 kDa			

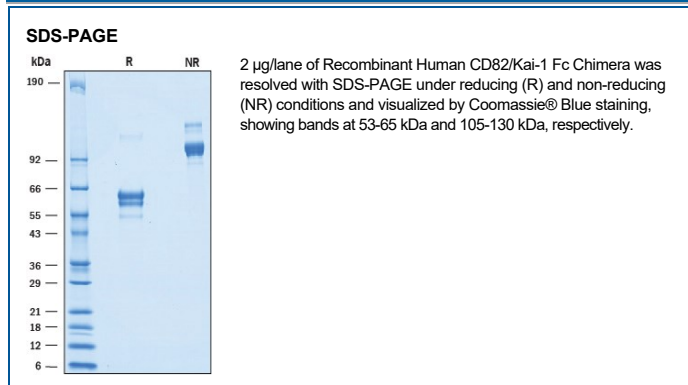
SPECIFICATIONS

SDS-PAGE	53-65 kDa, reducing conditions
Activity	Measured by its binding ability in a functional ELISA. When Recombinant CD82/Kai-1 Fc Chimera is used at 5 µg/mL (100 µL/well), the concentration of Biotinylated Recombinant Human TIMP-1 that produces 50% optimal binding response is 2.5-12.5 µg/mL.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 500 µg/mL in PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	<p>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</p> <ul style="list-style-type: none"> • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 3 months, ≤ -20 °C under sterile conditions after reconstitution.

DATA



BACKGROUND

CD82 antigen, also known as Kai-1, C33 and TSPAN27, is a widely expressed palmitoylated molecule of the tetraspanin superfamily (1, 2). The general architecture of tetraspanins contain four transmembrane domains, two extracellular loops, a small inner cytoplasmic loop, and intra-cellular N and C termini (1). One of the extracellular loops is termed the large extracellular loop (LEL) and it is responsible for interactions with binding partners such as integrins. Within the LEL, human CD82/Kai-1 shares 65% and 63% amino acid (aa) sequence identity with mouse and rat CD82/Kai-1, respectively. CD82/Kai-1 is a component of the promiscuous TIMP-1 interacting protein complex on the cell surface of human adenocarcinoma cells and gives insight into tumorigenic metastatic potential (3). CD82/Kai-1 suppresses EMT in prostate cancer cells adhered to fibronectin leading to reduced cell migration and invasiveness (4). CD82/Kai-1 function is important for muscle stem cell function in muscular disorders (5). Overexpression of CD82/Kai-1 suppresses growth, migration and invasion of oral cancer cells and may be considered as a potential therapeutic target in oral cancer (6).

References:

1. Mazurov, D. *et al.* (2006) *J. Biol. Chem.* **282**:3896.
2. Berditchevski, F. *et al.* 2001, *J Cell Sci.* **114**:4143.
3. Zang, J. *et al.* (2017) *Oncotarget.* **8**:6496.
4. Lee, J. *et al.* (2017) *Oncotarget.* **8**:1641.
5. Alexander, MS. *et al.* (2016) *Cell Stem Cell.* **19**:800.
6. Chai, J. *et al.* (2017) *Mol Med. Rep. April;* **15**:1527.