

CD137/4-1BB Protein, Canine (HEK293, Fc)

Cat. No.:	HY-P75609
Synonyms:	CD137; ILA; TNFRSF9; 4-1BB ligand receptor; CDw137
Species:	Canine
Source:	HEK293
Accession:	XP_850336.1 (I24-S185)
Gene ID:	608274
Molecular Weight:	Approximately 43.9 kDa

PROPERTIES

Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 µm filtered solution of PBS, pH 7.4. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.
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.
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	4-1BB is encoded by TNFRSF9 (CD137, ILA) and belongs to the tumor necrosis factor (TNF) receptor superfamily. 4-1BB is a surface glycoprotein that is expressed in a variety of cells, such as T cells, B cells, natural killer cells (NK), dendritic cells (DC), eosinophils and mast cells, as well as a variety of tumor cells, such as human leukemia cells. 4-1BB provides a co-stimulatory signal that activates the cytotoxic effects of CD8+ T cells and helps form memory T cells that promote the immune system to fight tumors. CD137 binds to CD137L to signal monocytes to increase their survival, and proliferation, and stimulate their migration and exosmosis. It also induces the release of a variety of pro-inflammatory factors, resulting in a large influx of inflammatory monocytes into tissues, forming an inflammatory environment. CD137 promotes the migration of mononuclear/macrophage cells to the tumor microenvironment by up-regulating Fra1 expression. At the same time, it also promoted the differentiation of mononuclear/macrophage cells into osteoclasts, providing a good microenvironment for breast cancer cells to colonize and grow in bone. It offers a promising treatment strategy for breast cancer metastasis. CD137 promotes apoptosis of endothelial cells (ECs) by inhibiting Nrf2 pathway and up-regulating NF-κB pathway ^{[1][2][3]} .
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Caution: Product has not been fully validated for medical applications. For research use only.

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