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Produktinformation

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Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
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- Expressversand

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PRODUCT INFORMATION

DPP-4/CD26 Extracellular Domain (human, recombinant)

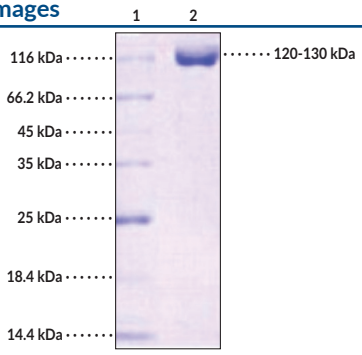
Item No. 31848

Overview and Properties

Synonyms:	ADABP, ADCP2, Adenosine Deaminase Complexing Protein 2, Dipeptidyl Peptidase 4, DPP-IV, T-cell Activation Antigen CD26, TP103
Source:	Active recombinant N-terminal human IgG1 Fc His-tagged DPP-4 expressed in HEK293 cells
Amino Acids:	29-766
Uniprot No.:	P27487
Molecular Weight:	112 kDa
Storage:	-80°C (as supplied)
Stability:	≥1 year
Purity:	≥95% estimated by SDS-PAGE
Supplied in:	Lyophilized from sterile 25 mM MES, with 150 mM sodium chloride, pH 6.5, 5% trehalose, 5% mannitol, and 0.01% tween-80
Endotoxin Testing:	<1.0 EU/µg, determined by the LAL endotoxin assay
Protein Concentration:	***batch specific*** mg/ml
Bioactivity:	See figures for details

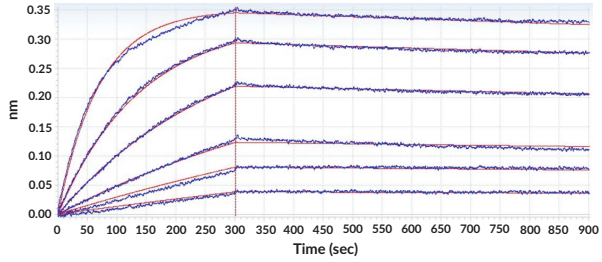
Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Images

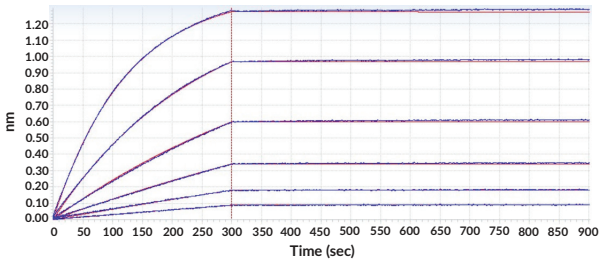


Lane 1: MW Markers
Lane 2: DPP-4/CD26 Extracellular Domain

SDS-PAGE Analysis of DPP-4/CD26 Extracellular Domain. This protein has a calculated molecular weight of 112 kDa. It has an apparent molecular weight of approximately 120-130 kDa by SDS-PAGE under reducing conditions due to glycosylation.



Octet RED System on DPP-4/CD26 Extracellular Domain. Using the Octet RED System, the affinity constant (K_d) of DPP-4/CD26 Extracellular Domain, bound to MERS-CoV Spike/RBD Protein fragment was 1.04 nM.



Octet RED System on DPP-4/CD26 Extracellular Domain. Using the Octet RED System, the affinity constant (K_d) of DPP-4/CD26 Extracellular Domain, bound to MERS-CoV Spike/S1 Protein was 0.02 nM.

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PRODUCT INFORMATION

Description

Dipeptidyl peptidase 4 (DPP-4), also known as CD26, is a type II transmembrane glycoprotein with a major role in glucose metabolism.[1] It is composed of a short cytoplasmic tail, a transmembrane domain, and a large extracellular domain, which contains a flexible stalk, glycosylation- and cysteine-rich regions, and a catalytic region. DPP-4 is expressed in endothelial and epithelial tissues, as well as T cells, activated B cells, activated natural killer (NK) cells, and myeloid cells. It functions as a homodimer that cleaves X-proline dipeptides from the N-terminus of various polypeptide substrates, such as GLP-1, to regulate glucose metabolism, immune responses, nociception, and blood pressure.[1-3] Additionally, DPP-4 acts as a co-stimulator of T cell receptor-mediated T cell activation and functional receptor for Middle East respiratory syndrome coronavirus (MERS-CoV).[1,4] Small molecule-induced inhibition of DPP-4 improves glucose tolerance in animal models of insulin resistance and has antihypertensive effects in various rodent models of hypertension.[2,3] Cayman's DPP-4/CD26 Extracellular Domain (human, recombinant) protein can be used for binding assays. This protein is a disulfide-linked homodimer. The reduced monomer, composed of DPP-4 (amino acids 29-766) fused to His-tagged human IgG1 Fc at its N-terminus, consists of 975 amino acids and has a calculated molecular weight of 112 kDa. As a result of glycosylation, the monomer migrates at approximately 120-130 kDa by SDS-PAGE under reducing conditions.

References

1. Klemann, C., Wagner, L., Stephan, M., *et al.* Cut to the chase: A review of CD26/dipeptidyl peptidase-4's (DPP4) entanglement in the immune system. *Clin. Exp. Immunol.* **185(1)**, 1-21 (2016).
2. Zhang, J., Chen, Q., Zhong, J., *et al.* DPP-4 inhibitors as potential candidates for antihypertensive therapy: Improving vascular inflammation and assisting the action of traditional antihypertensive drugs. *Front. Immunol.* **10**, 1050 (2019).
3. Barnett, A. DPP-4 inhibitors and their potential role in the management of type 2 diabetes. *Int. J. Clin. Pract.* **60(11)**, 1454-1470 (2006).
4. Du, H., Wang, D.W., and Chen, C. The potential effects of DPP-4 inhibitors on cardiovascular system in COVID-19 patients. *J. Cell. Mol. Med.* **24(18)**, 10274-10278 (2020).

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