Human DPP4 / DPPIV / CD26 Protein

Catalog Number: **10688-HNCH**

General Information

Gene Name Synonym:

ADABP; ADCP2; CD26; DPPIV; TP103

Protein Construction:

The native mature form of human DPPIV (NP_001926.2) extracellular domain (Asn 29-Pro 766) was expressed and purified.

Source: Human

Expression Host: HEK293 Cells

QC Testing

Purity: > 70 % as determined by SDS-PAGE

Bio Activity:

1. Measured by its ability to cleave the fluorogenic peptide substrate, Gly-Pro-7-amido-4-methylcoumarin (GP-AMC). The specific activity is > 2,500 pmoles/min/μg. 2. Using the Octet RED System, the affinity constant (Kd) of human DPP4 (Cat: 10688-HNCH) bound to Spike (HCoV-EMC/2012) (Cat: 40071-V31B) was 20 nM. 3. Using the Octet RED System, the affinity constant (Kd) of human DPP4 (Cat: 10688-HNCH) bound to Spike (HCoV-EMC/2012) (Cat: 40071-V05B) was 50 nM. 4. Using the Octet RED System, the affinity constant (Kd) of human DPP4 (Cat: 10688-HNCH) bound to Spike (HCoV-EMC/2012) (ECD, aa 1-1297) (Cat: 40069-V08B) was 33 nM. 5. Using the Octet RED System, the affinity constant (Kd) of human DPP4 (Cat: 10688-HNCH) bound to Spike-His (aa 1-760) (Cat: 40021-V08H) was 12 nM.

Endotoxin:

< 1.0 EU per μg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 ℃

Predicted N terminal: Asn 29

Molecular Mass:

The recombinant human DPPIV exists as the mature active form, and consists of 738 amino acids with a predicted molecular mass of 85.4 kDa. The apparent molecular mass of the glycosylated rhDPPIV is approximately 95 kDa in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile 100mM NaCl, 50mM Tris, pH 7.5

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

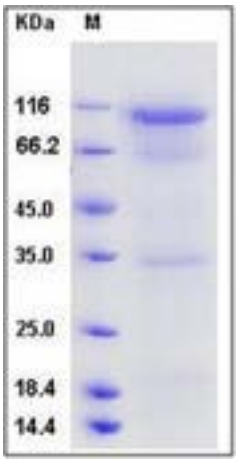
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Dipeptidyl peptidase-4 (DPP4) or adenosine deaminase complexing protein 2 (ADCP 2) or T-cell activation antigen CD26 is a serine exopeptidase belonging to the S9B protein family that cleaves X-proline dipeptides from the N-terminus of polypeptides, such as chemokines, neuropeptides, and peptide hormones. The enzyme is a type II transmembrane glycoprotein, expressed on the surface of many cell types. It is also present in serum and other body fluids in a truncated form (sCD26/DPPIV). The soluble CD26 (sCD26) as a tumour marker for the detection of colorectal cancer (CRC) and advanced adenomas. As both a regulatory enzyme and a signalling factor, DPP4 has been evaluated and described in many studies. DPP4 inhibition results in increased blood concentration of the incretin hormones glucagon-like peptide-1 (GLP-1) and gastric inhibitory polypeptide (GIP). This causes an increase in glucose-dependent stimulation, resulting in a lowering of blood glucose levels. Recent studies have shown that DPP4 inhibitors can induce a significant reduction in glycosylated haemoglobin (HbA(1c)) levels, either as monotherapy or as a combination with other antidiabetic agents. Research has also demonstrated that DPP4 inhibitors portray a very low risk of hypoglycaemia development, and are a new pharmacological class of drugs for treating Type 2 diabetes.

References

1.Doupis J, *et al.* (2008) DPP4 inhibitors: a new approach in diabetes treatment. Adv Ther. 25(7): 627-43. 2.Havre PA, *et al.* (2008) The role of CD26/dipeptidyl peptidase IV in cancer. Front Biosci. 13: 1634-45. 3.De Chiara L, *et al.* (2009) Soluble CD26 levels and its association to epidemiologic parameters in a sample population. Dis Markers. 7(6): 311-6.