

Dipeptidyl Peptidase IV from Human, Recombinant

Cat. No. NATE-0204 Lot. No. (See product label)

Introduction

Description	Native DPPIV is a ubiquitous type II transmembrane glycoprotein and a serine protease of the S9 prolyl-
	oligopeptidase family. In vivo, it is synthesized with a signal peptide, which functions as the membrane
	anchoring domain. There is an 88% sequence homology between the human and porcine kidney
	enzymes. Both exist as homodimers with a subunit molecular weight of \sim 30 kDa. The high mannose 100
	kDa DPPIV precursor is processed in the Golgi to yield a 124 kDa heavily N-and O-linked mature
	glycoprotein. It is then sorted to the apical membrane through the concerted action of both N-and O-
	linked glycans and its association with lipid microdomains. The porcine enzyme contains 18.3%
	carbohydrates, which the glycan composition is 0.9% fucose, 3.4% mannose, 5.1% galactose, 8.2%
	glucosamine, and 0.7% sialic acid. DPPIV is highly expressed on endothelial cells, epithelial cells, and
	lymphocytes. It is also present in plasma in its soluble form.

- **Applications** Human dipeptidyl peptidase IV has been used to study interactive hemodynamic effects of its inhibition and angiotensin-converting enzyme inhibition in humans. Human dipeptidyl peptidase IV has also been used in a study that informed the understanding of Hymenoptera venom allergies. The enzyme from Creative Enzymes has been used to study the LC-MS (liquid chromatography-mass spectrometry) based assay method for DPP-IV inhibitor screening and substrate discovery.
- **Synonyms** EC 3.4.14.5; 54249-88-6; DPPIV; DPP4; dipeptidyl aminopeptidase IV; Xaa-Pro-dipeptidylaminopeptidase; Gly-Pro naphthylamidase; postproline dipeptidyl aminopeptidase IV; lymphocyte antigen CD26; glycoprotein GP110; dipeptidyl peptidase IV; glycylproline aminopeptidase; glycylproline aminopeptidase; X-prolyl dipeptidyl aminopeptidase; pep X; leukocyte antigen CD26; glycylprolyl dipeptidylaminopeptidase; dipeptidyl-peptide hydrolase; glycylprolyl aminopeptidase; dipeptidylaminopeptidase IV; DPP IV/CD26; amino acyl-prolyl dipeptidyl aminopeptidase; T cell triggering molecule Tp103; X-PDAP

Product Information

Species	Human
Source	Baculovirus infected Sf9 cells
Form	Supplied as a solution in 10 mM Tris-HCl, pH 7.6, 200 mM NaCl, 1 mM EDTA and 10% glycerol.
EC Number	EC 3.4.14.5
CAS No.	54249-88-6
Molecular Weight	105 kDa
Activity	> 10 units/mg protein
Pathway	Incretin Synthesis, Secretion, and Inactivation, organism-specific biosystem; Integration of energy metabolism, organism-specific biosystem; Metabolism, organism-specific biosystem; Protein digestion and absorption, organism-specific biosystem; Protein digestion and absorption, conserved biosystem; Regulation of Insulin Secretion, organism-specific biosystem; Synthesis, Secretion, and Inactivation of Glucagon-like Peptide-1 (GLP-1), organism-specific biosystem

Function

aminonentidase activity: collagen hinding: dinentidyl-nentidase activity: nentidase activity: nentide

<i>i</i> unction	binding; protease binding; protein binding; protein homodimerization activity; receptor activity; receptor binding; serine-type endopeptidase activity; serine-type peptidase activity	
Unit Definition	One unit will produce 1.0 μmole of p-nitroaniline from Gly-L-Pro p-nitroanilide per min in 100 mM Tris-HCl at pH 7.6 at 37°C.	
Usage and Packaging		
Package	pkg of > 1.0 units/vial	
Storage and Shipping Information		
Storage	-20°C	