



3050 Spruce Street
Saint Louis, Missouri 63103 USA
Telephone 800-325-5832 • (314) 771-5765
Fax (314) 286-7828
email: techserv@sial.com
sigma-aldrich.com

Product Information

Dipeptidyl Peptidase from porcine kidney

Product Number **D 7052**
Storage Temperature -0 °C

Product Description

CAS Number: 54249-88-6
Enzyme Commission (EC) Number: 3.4.14.5
Molecular Weight: 280 kDa¹
pI: 5.2¹
Extinction Coefficient: $E^{1\%} = 11.5$ (280 nm)²
Synonyms: Dipeptidyl aminopeptidase IV

Dipeptidyl peptidase from porcine kidney is a homodimer consisting of two equal subunits with a molecular weight of 130 kDa. It is a glycoprotein containing 18.3% carbohydrates, of which the sugar composition is 0.9% fucose, 3.4% mannose, 5.1% galactose, 8.2% glucosamine, and 0.7% sialic acid.^{1,2}

Dipeptidyl peptidase IV is a serine protease that releases N-terminal dipeptides from the unsubstituted N-terminus of peptides with the sequence of X-Pro-Y, X-Ala-Y, and X-Hyp-Y. The pH optimum for the protease is 7.8-8.0. The enzymatic activity of this product is determined using the chromogenic substrate Gly-Pro-p-nitroanilide. Reported K_M values are 0.21 mM for Gly-Pro-2-naphthylamide and 0.24 mM for Ala-Ala-2-naphthylamide. Dipeptidyl peptidase does not require activators; however, it is inhibited by diisopropyl fluorophosphate, phenylmethanesulfonyl fluoride, and diethyl p-nitrophenyl phosphate.^{1,2}

Precautions and Disclaimer

For Laboratory Use Only. Not for drug, household or other uses.

Preparation Instructions

This product is soluble in 100 mM Tris HCl buffer, pH 8.0 (1 vial/ml), yielding a clear, colorless solution.

References

1. Fukasawa, K. M., et al., Comparison of dipeptidyl peptidase IV prepared from pig liver and kidney. *Biochim. Biophys. Acta*, **657(1)**, 179-189 (1981).
2. Kenny, A. J., et al., Dipeptidylpeptidase IV, a kidney brush border serine peptidase. *Biochem. J.*, **157(1)**, 169-182 (1976).

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