EVIDENCE FOR A NEW ISOFORM OF CD26/DPPIV

Ribeiro, A.J.V[1]., Borojevic, R.[2], Alves, G. [1], Pereira, D.A [1].
[1]Instituto Nacional do Câncer, [2]Universidade Federal do Rio de Janeiro

CD26/DPPIV is a serine protease with potential participation in several biochemical processes, such as activation of immunocompetent cells and fibronectin-mediated adhesion. It is also possible that CD26/DPPIV is involved in activation or deactivation of biologically relevant peptides. It has an intrinsic dipeptidyl peptidase IV activity, which cleaves NH2-terminal dipeptides from polypeptides with either L-proline or L-alanine at the penultimate position. Many hematopoietic cytokines and chemokines contain the CD26/DPPIV-susceptible N-terminal structure. Our previous study identified a protein from mouse bone marrow stroma showing CD26/DPPIV enzyme activity with the same antigenic properties, with an estimated molecular mass of 70 kDa, and not the expected molecular mass of 110 kDa. Therefore, the objective of this study was to investigate in S17 cell lineage and in several mouse tissues the sequence of CD26/DPPIV gene and its mRNA size. Different primers pairs were constructed for CD26/DPPIV gene analysis, and the amplification of different regions of its cDNA showed that the inicial sequence of the gene was not transcripted into the mRNA. Northern Blot analysis was performed in order to assess mRNA size. Our results indicated that mRNA size of CD26/DPPIV in the tissues studied was concordant with the protein molecular weight of 70 kDa. We hypothesize that we found a new isoform of CD26/DPPIV. Function importance of this new isoform remains to be revealed.