



Recombinant Human Vaspin

20150227BB



FOR RESEARCH ONLY! NOT FOR HUMAN USE!

Cat.-no.:	100-362S
Size:	5 µg
Lot. No.:	According to product label

Scientific Background

Gene-ID (NCBI):	145264
Synonyms:	SERPINA12; OL-64

Vaspin is a newly described adipocytokine expressed predominantly in visceral white adipose tissues. Structure analysis of Vaspin predicts the presence of three β -sheets, nine α -helices, and one central loop, which are distinctive structural features of Serpin family members. The serpins are irreversible (“suicidal”) serine-protease inhibitors, characterized by having more than 30% sequence homology with α 1-antitrypsin and a conserved tertiary structure, which contains an exposed reactive center loop that acts as a pseudo-substrate for the target proteinase. Members of this family play an important role in a number of fundamental biological processes including blood coagulation, fibrinolysis, complement activation, angiogenesis, inflammation, and tumor suppression. In human, the serpins represent approximately 2% of total serum proteins, of which 70% is α 1- antitrypsin. Vaspin exhibits 40.2% sequence identity with α -1-antitrypsin. Yet, its protease inhibitory activity is still unknown. Vaspin mRNA expression in visceral fat is positively correlated with BMI and percent of body fat. Administration of Vaspin to obese mice improved glucose tolerance and insulin sensitivity, reflected by normalized blood glucose levels. It also led to the reversal of altered expression of diabetes-relevant adipocytokines including leptin, adiponectin, resistin, and TNF- α . These findings suggest a potential clinical use for Vaspin in ameliorating certain aberrations seen in the diabetic/obesity metabolic syndrome. Recombinant human Vaspin is a 45.2 kDa protein containing 395 amino-acid residues.

Sequence

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MLKPSFSPRNYKALSEVQGWKQRMAAKELARQNMDLGFKLLKKLAFYNPGRN
IFLSPLSISTAFSMLCLGAQDSTLDEIKQGFNFRKMPEKDLHEGFHYI IHEL
TQKTQDLKLSIGNTLFI DQRLQPQRKFLEDAKNFYSAETILTNFQNLEMAQK
QINDFISQKTHGKINNLIENIDPGTVMLLANYIFFRARWKHEFDPNVTKEED
FFLEKNSSVKVPMFRSGIYQVGYDDKLSCTILEIPYQKNITAFILPDEGK
LKHLEKGLQVDTFSRWKTLSSRRVVDVSVRLHMTGTFDLKKTLSYIGVSKI
FEEHGDLTKIAPHRSLKVGAEVHKAELKMDERGTGEGAAGTGAQTLPMETPLV
VKIDKPYLLLIYSEKIPSVLFLGKIVNPIGK
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Database References

Protein RefSeq:	NP_776249.1
Uniprot ID:	Q8IW75
mRNA RefSeq:	NM_173850.2

Product Specifications

Expressed in	E. coli
Purity	>98% by SDS-PAGE & HPLC analysis
Endotoxin level	< 0.1 ng /µg of protein (<1EU/µg).
Formulation	lyophilized
Length (aa):	395
MW:	45.2 kDa

Biological Activity: Data not available.



AVOID REPEATED FREEZE AND THAW CYCLES!