

Lipoprotein

A lipoprotein is a biochemical assembly that contains both [proteins](#) and [lipids](#), bound to the proteins, which allow fats to move through the water inside and outside cells. The proteins serve to emulsify the lipid molecules. Many [enzymes](#), [transporters](#), structural proteins, [antigens](#), [adhesins](#), and [toxins](#) are lipoproteins. Examples include the plasma lipoprotein particles classified under high-density ([HDL](#)) and low-density ([LDL](#)) lipoproteins, which enable fats to be carried in the bloodstream, the [transmembrane proteins](#) of the mitochondrion and the chloroplast, and bacterial lipoproteins.

To investigate the [RBP4/Lipoprotein-Phospholipase A2/Netrin-1](#) signal regulation of cognitive function impairment in diabetic nephropathy patients with silent [cerebral infarction](#) (SCI).

One-hundred patients newly diagnosed with diabetic nephropathy patients were included. The patients were divided into SCI group and NSCI group according to the radiological data. The degrees of cognitive dysfunction were evaluated. Serum RBP4 concentrations were determined by ELISA and protein expressions of Lp-PLA2 and Netrin-1 were determined by Western Blot.

Compared with NSCI group, the cognitive function of patients in SCI group was impaired, the concentrations of RBP4 and the expressions of Lp-PLA2 and Netrin-1 increased ($P < 0.05$). RBP4 concentrations were positively correlated with the cognitive dysfunction of SCI patients. Moreover, there existed a regression correlation between them. Conclusion RBP4 may be used as a predictive factor of diabetic nephropathy patients complicated with SCI and is positively correlated with cognitive dysfunction. RBP4/Lp-PLA2/Netrin-1 pathway activation may be one of the occurrence mechanisms in diabetic nephropathy complicated with SCI ¹⁾.

Apolipoprotein E-4

[apolipoprotein E4](#)

HDL

[HDL](#)

¹⁾

Chen D, Huang X, Lu S, Deng H, Gan H, Du X, Weixue T. RBP4/Lp-PLA2/Netrin-1 signaling regulation of cognitive dysfunction in diabetic nephropathy complicated with silent cerebral infarction. *Exp Clin Endocrinol Diabetes*. 2017 Jul 13. doi: 10.1055/s-0043-109099. [Epub ahead of print] PubMed PMID: 28704853.

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