

[Open Peer Review on Qeios](#)

Autologous CD40L-expressing B-CLL Vaccine

National Cancer Institute

Source

National Cancer Institute. *Autologous CD40L-expressing B-CLL Vaccine*. NCI Thesaurus. Code C118852.

A cancer vaccine consisting of autologous, B-chronic lymphocytic leukemia (B-CLL) cells harvested from a patient and transduced with an adenoviral vector encoding the gene for the human CD40 ligand (CD40L; TRAP; CD154), with potential immunostimulating and antineoplastic activities. Upon reintroduction into the patient, the autologous CD40L-expressing B-CLL vaccine expresses the co-stimulatory molecule CD40L, which binds to its cognate receptor, CD40, on antigen presenting cells (APC). This induces apoptosis, stimulates maturation and proliferation of APCs, and facilitates a cytotoxic T-lymphocyte (CTL) response against tumor cells. CD40L is a type II membrane protein that binds to CD40, which is a cell surface receptor that belongs to the tumor necrosis factor (TNF) receptor superfamily.