



October 06-08, 2014 Hilton San Antonio Airport, TX, USA

## Line up of new enzyme-linked immune-sorbent assay (ELISA) kits for quantitation of HTLV-1(gp46, p24, Tax), Tax-related antigens (OX40, OX40L, CD25) and HIV-1 p24

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Quantitative antigen specific-sandwich ELISA kits have been routinely used in laboratories.Despite many ELISA kits are commercially available, some of them are not always satisfactory due to low sensitivity or specificity and these is a demand for new kits specific for the other antigens. For generation of reliable quantitative and easy quantitative ELISA kits for HTLV-1, HTLV-1-related host cell antigensand HIV-1, wescreened our monoclonal antibody (mAb) library to find appropriate combinations of capture and detector mAbs that enabled quantitation of various target antigens.Using our mouse and rat mAbs, wehave establisheddirect and indirect ELISA kits specific for HTLV-1 antigens (core p24, envelopegp46 and Tax), Tax-related host antigens (OX40, OX40L, CD25), and HIV-1 p24.These kits were applicable forquantitation of antigens in not only culture supernatants and cell lysates but also human serum/plasma. Preliminary experiments using these kitsshowed that HTLV-1 p24 and gp46 together with OX40 and CD25, but not Tax or OX40L, were released into culture supernatants of HTLV-1-infected T cell lines. Interestingly, examination of plasma from various HTLV-1 infected donors showed that soluble OX40 as well as CD25 levels were significantly higher in adult T cell leukemia (ATL) patients than the others. A new ELISA kit for HIV-1 p24 using combination of mouse capture mAb and rat-human chimeric detector mAb produced in cocoon showed a high sensitivity without false-positive interference by human heterophile antibodies.We hope that these ELISA kits will be helpful for many fields of studies on HTLV-1 and HIV-1-related diseases.

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