Recombinant HTLV-2 Envelope Protein, sFc-tagged

Cat. No. HTL-289 **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant human T-cell lymphotropic virus type 2 (HTLV-2) envelope protein. The protein was produced in HEK293 cells and purified from culture supernatant with a TEV cleavage site and C-terminal sheep Fc-tag.
Tag	sheep Fc
Background	HTLV-1 and HTLV-2 require cell-to-cell contact for efficient transmission and utilize envelope glycoprotein-mediated cell binding and entry (envelope glycoprotein gp62). Specific enzymatic cleavages in vivo yield mature proteins. Envelope glycoproteins are synthesized as an inactive precursor that is N-glycosylated and processed likely by host cell furin or by a furin-like protease in the Golgi to yield the mature SU (gp46) and TM (gp21) proteins. The cleavage site between SU and TM requires the minimal sequence [KR]-X-[KR]-R. HTLV-1 attachment and fusion to target cells begins when surface subunit (SU) of the HTLV-1 envelope glycoprotein interacts with three cellular surface receptors: Glucose Transporter (GLUT1), Heparin Sulfate Proteoglycan (HSPG) and the VEGF-165 receptor Neuropilin-1 (NRP-1). These receptors are widely distributed on target cells. The HTLV-1 and HTLV-2 surface (SU) and transmembrane (TM) subunits of Env share 65% and 79% residue identity, respectively. Despite this high similarity, HTLV-1 and HTLV-2 utilize a slightly different complex of receptor molecules. HTLV-1 utilizes heparan sulfate proteoglycan (HSPG) and neuropilin-1 (NRP1) for binding and glucose transporter 1 (GLUT1) for entry. HTLV-2 also utilizes NRP1 and GLUT1, but not HSPGs (Eusebio-Ponce et al., 2019; Martinez et al., 2019). The surface protein (SU) attaches the virus to the host cell by binding to its receptor. This interaction triggers the refolding of the transmembrane

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	protein (TM) and is thought to activate its fusogenic potential by unmasking its fusion peptide. Fusion occurs at the host cell plasma membrane and the transmembrane protein (TM) acts as a class I viral fusion protein. Membrane fusion leads to delivery of the nucleocapsid into the cytoplasm.
Notes	This product is intended for research and manufacturing uses only. It is not a diagnostic device. The user assumes all responsibility for care, custody and control of the material, including its disposal, in accordance with all regulations.
Type	Recombinant
ClassID 1	Infectious Disease

GENE INFORMATION

Synonyms	HTLV-2 Envelope

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