

# Recombinant HTLV-2 p24 Protein, 136-350, C-6×His tagged

**Cat. No.** p24-48H    **Lot. No.** (See product label)

## SPECIFICATION

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| <b>Product Overview</b> | Human T-lymphotropic virus 2 (HTLV-2) p24 gag protein produced in E. coli. There is evidence for dimer and higher oligomer formation.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Species</b>          | HTLV2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Source</b>           | E.coli                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>ProteinLength</b>    | 136-350                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Description</b>      | <p>TLV-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.</p> |

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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 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.

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| <b>Form</b>           | Liquid                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Molecular Mass</b> | Expected Molecular Weight: 26 kDa<br>Observed Molecular Weight: 24 kDa                                                                                                                                                                                                                                                                                                                       |
| <b>Storage</b>        | Short Term Storage: -80 centigrade<br>Long Term Storage: -80 centigrade<br>Can be frozen, but avoid multiple freeze-thaw cycles.                                                                                                                                                                                                                                                             |
| <b>Concentration</b>  | 1.04 mg/mL                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Storage Buffer</b> | DPBS buffer                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>References</b>     | <ol style="list-style-type: none"> <li>1. Eusebio-Ponce E, Anguita E, Paulino-Ramirez R, Candel FJ. HTLV-1 infection: An emerging risk. Pathogenesis, epidemiology1. diagnosis and associated diseases. Rev Esp Quimioter. 2019 Dec;32(6):485-496.</li> <li>2. Martinez MP, Al-Saleem J, Green PL. Comparative virology of HTLV-1 and HTLV-2. Retrovirology. 2019 Aug 7;16(1):21.</li> </ol> |

## GENE INFORMATION

**Gene Name** HTLV2gp2 hypothetical protein [ Human T-lymphotropic virus 2 ]

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|------------------------|--------------------------------------------------------------------------------------------------------------------------|
| <b>Official Symbol</b> | HTLV2gp2                                                                                                                 |
| <b>Synonyms</b>        | HTLV2gp2; hypothetical protein; hypothetical protein; p19-gag protein [2]; p24-gag protein [2]; p15-gag protein [2]; p24 |
| <b>Gene ID</b>         | 1491944                                                                                                                  |
| <b>Protein Refseq</b>  | NP_041002                                                                                                                |
| <b>UniProt ID</b>      | P03346                                                                                                                   |

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