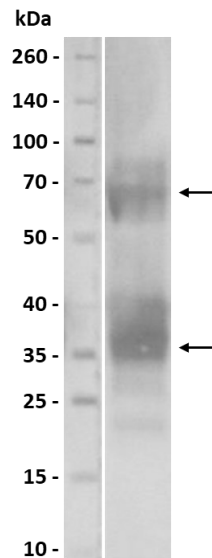


# Antigen Datasheet

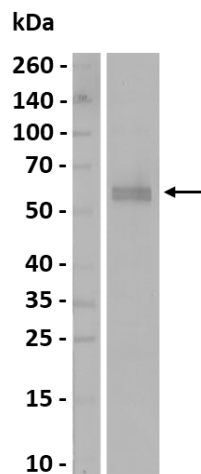
## OVERVIEW AND PROPERTIES

<b>Product Name</b>	PtX™ Human Immunodeficiency Virus Type 1 gp41 Protein
<b>Synonyms</b>	HIV-1 envelope glycoprotein gp41
<b>Catalogue Number</b>	CBT_P0005
<b>Expression Host</b>	<i>Nicotiana benthamiana</i> plants
<b>Animal Free</b>	Yes
<b>Class</b>	Recombinant
<b>Type</b>	Protein
<b>Original Gene species</b>	HIV-1
<b>Molecular Weight (kDa)</b>	Different glycoforms at ~31 - ~35 kDa on SDS-PAGE under reducing conditions. Dimer commonly formed at ~65 kDa.
<b>Sequence</b>	RLLALETLIQNQQLLNLRWGCKGRLVCYTSV
<b>Tag</b>	Mouse Fc IgG2a with hinge region
<b>Reporter Protein</b>	None
<b>Description</b>	This product is a recombinant HIV-1 gp41 protein, fused to a Mouse Fc Tag. It was produced in <i>Nicotiana benthamiana</i> plants via <i>Agrobacterium tumefaciens</i> -mediated infiltration.
<b>Protein Name</b>	Gp41
<b>Accession Number</b>	This sequence was obtained from Zouhair et al (2006) Group O Human Immunodeficiency Virus Type 1 Infection That Escaped Detection in Two Immunoassays. Journal of Clinical Microbiology, 44(2):662–665. doi:10.1128/JCM.44.2.662–665.2006.
<b>Verified Applications</b>	Western blot
<b>Concentration</b>	0.25-0.5 mg/ml
<b>Form</b>	Liquid
<b>Colour</b>	Clear
<b>Preparation</b>	Ready to use
<b>Storage</b>	Short term (up to one week): 2 – 8 °C Long term: Aliquot and store at – 20 °C Store immediately. Aliquot and avoid multiple freeze thaw cycles.
<b>Storage Buffer</b>	0.1 M Phosphate Buffered Saline, pH 7.4
<b>Purification Notes</b>	This product was purified using Protein A-affinity chromatography.
<b>Purity</b>	% as determined by SDS-PAGE
<b>General Notes</b>	If for any reason the product does not perform as specified, please contact our scientific support team for assistance by emailing techsupport@capebiologix.com. For Research Use only, unless otherwise indicated.

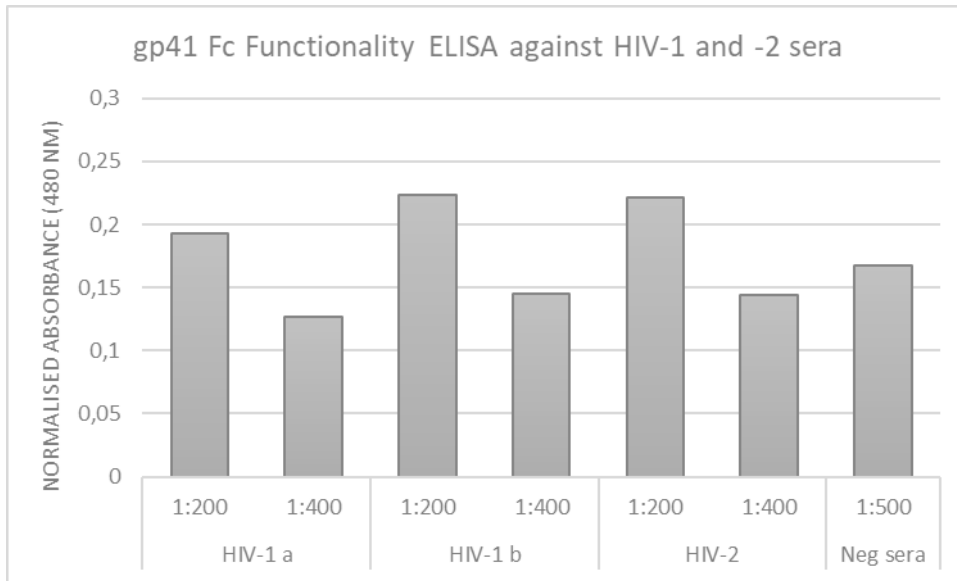
IMAGES



**Figure 1.** Functional Western blot analysis to evaluate if the gp41 Fc protein can be detected by HIV-1 serum. One microgram of gp41 Fc protein under denaturing and reducing conditions was probed with HIV-1 patient serum at a 1: 2 000 dilution. Goat Anti-Human IgG (Fc-specific) HRP (Sigma Aldrich, A0170) at a 1: 5 000 dilution was used for detection. The expected protein band sizes of monomer gp41 Fc (~35 kDa) and dimer gp41 Fc (~65 kDa) were observed, with some additional non-specific bands that can be as a result of different glycoforms of the protein.



**Figure 2.** Specificity Western blot analysis. One microgram of gp41 Fc protein under denaturing and reducing conditions was probed with HIV-2 patient serum at a 1: 5 000 dilution. Goat Anti-Human IgG (Fc-specific) HRP (Sigma Aldrich, A0170) at a 1: 10 000 dilution was used for detection. A protein band at the size of a gp41 Fc dimer (~65 kDa) was observed.



**Figure 3.** Indirect ELISA. ELISA analysis of gp41 Fc protein at 2 ng/μl probed with 1:200 and 1:400 dilution of patient HIV-1, HIV-2 and negative serum. A Goat Anti-Human IgG (Fc-specific) HRP (Sigma Aldrich, A0170) at a 1: 10 000 dilution was used for detection.