

**High concentration****High purity****His-Tagged****Formulation on request****Analytical :**

- 1 Western Blot/Dot Blot
  - 2 ELISA
  - 3 Lateral flow assay control
- Protocol available on request

**ORDER****rGP41 in solution**

\* A080922-01 : 1mg/ml

**Other quantities and buffer  
available on request**

**Background**

The **human immunodeficiency virus (HIV)** is a lentivirus (a subgroup of retrovirus) that causes HIV infection and acquired immunodeficiency syndrome (AIDS)[1]. AIDS is a condition in humans in which progressive failure of the immune system allows life-threatening opportunistic infections and cancers to thrive. Infection with HIV occurs by the transfer of blood, semen, vaginal fluid, pre-ejaculate, or breast milk. HIV infects vital cells in the human immune system such as helper T cells (specifically CD4<sup>+</sup> T cells), macrophages, and dendritic cells [2]. Since its discovery, AIDS has caused an estimated 36 million deaths worldwide (as of 2012) [3]. In 2013 it resulted in about 1.34 million deaths [4]. As of 2012, approximately 35.3 million people are living with HIV globally [4].

**Product**

GP41 also known as glycoprotein 41 is a subunit of the envelope protein complex of retroviruses, including Human immunodeficiency virus (HIV). GP41 is a transmembrane protein that contains several sites within its ectodomain that are required for infection of host cells. The env gene codes for GP160, a precursor, which is extensively glycosylated and proteolytically cleaved into two subunits GP120 and GP41 (this protein) by furin, a host cellular protease.

**Technical data**

This protein is recombinant truncated GP41 (core of glycoprotein 41 protein) from HIV-1 virus expressed in *Escherichia coli*. It is purified by Immobilized metal ion affinity chromatography. The protein's theoretical size is 13Kda.

This protein is 6 His tagged.

**Application**

This product can be used by RDT manufacturers

**Literature**

- 1 Weiss RA (May 1993). "How does HIV cause AIDS?". *Science* 260 (5112): 1273–9
- 2 Cunningham AL, Donaghy H, Harman AN, Kim M, Turville SG (2010). "Manipulation of dendritic cell function by viruses". *Current opinion in microbiology* 13 (4): 524–529.
- 3 "Fact Sheet". UNAIDS.org. 2013. Retrieved December 4, 2013
- 4 GBD 2013 Mortality and Causes of Death, Collaborators (17 December 2014). "Global, regional, and national age-sex specific all-cause and cause-specific mortality for 240 causes of death, 1990–2013: a systematic analysis for the Global Burden of Disease Study 2013.". *Lancet* 385 (9963): 117–71