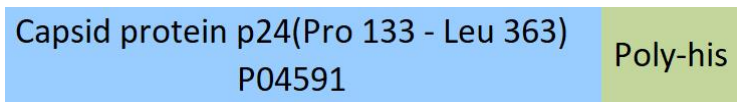
HIV (HIV1-HXB2) Capsid protein p24, His Tag (MALS verified)

Catalog # CP4-H52H3

Source

HIV (HIV1-HXB2) Capsid protein p24, His Tag(CP4-H52H3) is expressed from human 293 cells (HEK293). It contains AA Pro 133 - Leu 363 (Accession # P04591).
Predicted N-terminus: Pro 133

Molecular Characterization



This protein carries a polyhistidine tag at the C-terminus.

The protein has a calculated MW of 27.5 kDa. The protein migrates as 26-27 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

Endotoxin

Less than 1.0 EU per μg by the LAL method.

Purity

>90% as determined by SDS-PAGE.

>90% as determined by SEC-MALS.

Formulation

Lyophilized from 0.22 μm filtered solution in PBS, pH7.4 with trehalose as protectant.

Contact us for customized product form or formulation.

Reconstitution

Please see Certificate of Analysis for specific instructions.

For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.

Storage

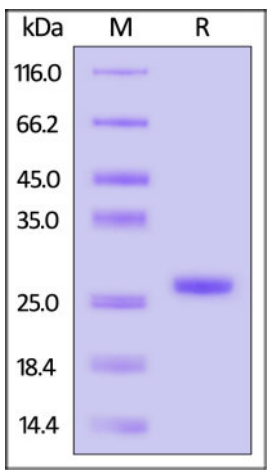
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

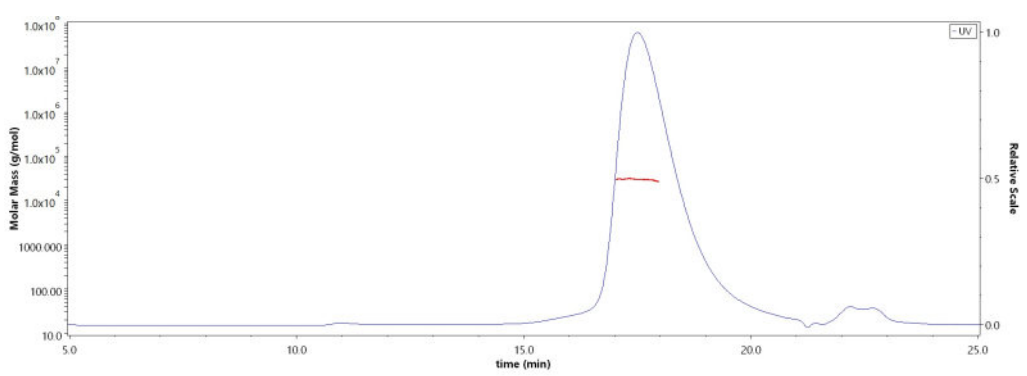
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE



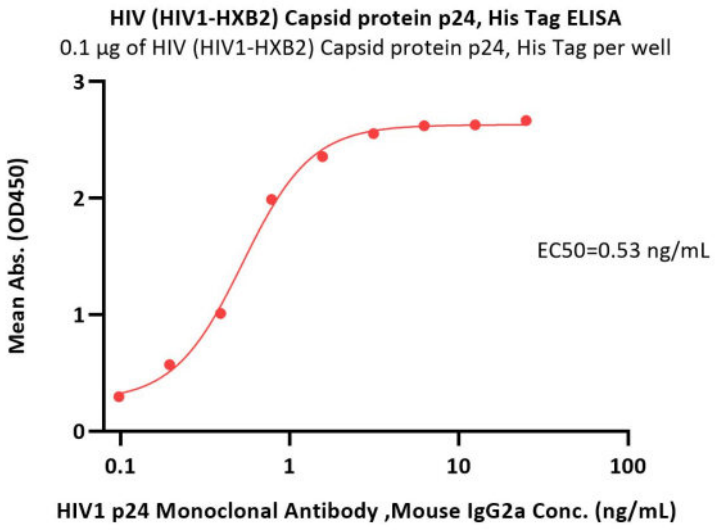
HIV (HIV1-HXB2) Capsid protein p24, His Tag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 90%.

SEC-MALS



The purity of HIV (HIV1-HXB2) Capsid protein p24, His Tag (Cat. No. CP4-H52H3) is more than 90% and the molecular weight of this protein is around 24-34 kDa verified by SEC-MALS.
Report

Bioactivity-ELISA



Immobilized HIV (HIV1-HXB2) Capsid protein p24, His Tag (Cat. No. CP4-H52H3) at 1 μg/mL (100 μL/well) can bind HIV1 p24 Monoclonal Antibody ,Mouse IgG2a with a linear range of 0.1-2 ng/mL (QC tested).

Background

The Gag protein from retroviruses, also known as p24, forms the inner protein layer of the nucleocapsid. It is composed of two domains, the N-terminal domain (NTD), which contributes to viral core formation, and the C-terminal domain (CTD), which is required for capsid dimerisation, Gag oligomerization and viral formation. This protein performs highly complex orchestrated tasks during the assembly, budding, maturation and infection stages of the viral replication cycle. During viral assembly, the proteins form membrane associations and self-associations that ultimately result in budding of an immature virion from the infected cell. Gag precursors also function during viral assembly to selectively bind and package two plus strands of genomic RNA. ELISA tests for p24 is the most commonly used method to demonstrate virus replication both in vivo and in vitro.

Clinical and Translational Updates