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**Recombinant HIV-1 Gag****REP0055****50µg****Description**

The Gag protein is the major structural protein required for virus assembly. It is synthesized as a polyprotein in the cytosol of an infected cell and contains four functional segments: Matrix (MA), Capsid (CA), Nucleocapsid (NC), and p6. The NC region is flanked by two "spacer" segments, denoted SP1 and SP2. The polyprotein is all alpha helical, except the NC region, which is composed of two RNA interacting zinc knuckle domains. Gag is often referred to an "assembly machine" because expression of Gag alone is sufficient to produce budding virus-like particles (VLP's), due to multimerization of roughly 2000 Gag molecules per virion. Gag is cleaved by the protease at multiple sites. The Gag proteins play important roles throughout the viral life-cycle, including the assembly and release of viral particles, their subsequent maturation into infectious virions, and during the events occurring between the release of capsids into newly infected cells and the integration of proviral DNA. During the early steps of the viral life cycle, viral proteins, especially capsid (CA) are in intimate contact with the intracellular environment. Considerable evidence supports the idea that interactions between host cellular proteins and the viral capsid are important for events occurring early in infection, such as the transport of the preintegration complex, uncoating of the capsid, nuclear entry, and integration. Gag capsid (CA) protein can markedly reduce viral fitness, and interactions of CA with host proteins such as cyclophilin A (CypA) and TRIM5alpha can have important effects on viral infectivity.

**Product type**

Recombinant protein

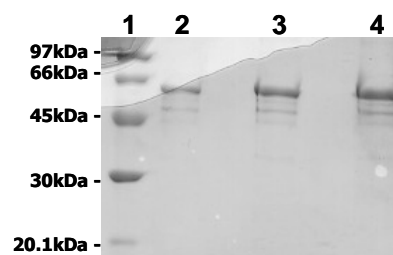
**Peptide**Recombinant full-length protein: HIV-I Gag - Accession Number: **AAD39400****Expression System***Escherichia coli***Tested by**

SDS Page, Western Blotting

**Purity**

&gt;90% pure estimated by SDS-PAGE (EU Ph. 5.0 § 2.5.31)

Purified recombinant HIV-1 gag protein (lane 1, molecular weight standard; lane 2, 2.5µg; lane 3, 5µg; lane 4, 7.5µg) was separated by SDS-PAGE (12% polyacrylamide) and stained with Coomassie Blue.

**Form**

Lyophilized.

The protein should be reconstituted in apyrogenic sterile water or 1X PBS.

**Storage buffer**

Preservative 1% glycerol.

**Storage instructions**

Shipped at room temperature. The lyophilized protein is stable for 24 months if stored at -20°C. The reconstituted solution must be used immediately.