



## HIV-1 ENV Antigen

Recombinant  
Expressed in *E. coli*

Product Number **H 9909**  
Storage Temperature  $-20\text{ }^{\circ}\text{C}$

Synonyms: gp41 HIV antigen

### Product Description

The HIV-1 ENV Antigen is a recombinant 32 kDa protein encoded by the envelope protein genes of the Human Immunodeficiency Virus (HIV) Type I expressed in and isolated from *Escherichia coli*. It contains 287 amino acid residues (from 466 to 753) as well as a  $\beta$ -galactosidase tag (114 kDa) on the N-terminus.

In HIV-infected individuals, there are neurotoxic effects that are indirectly associated with this antigen; and there is evidence suggesting that this antigen may play a part in the development of HIV-associated dementia (HAD).<sup>2,3</sup> The specific role of gp41 in HAD remains to be determined.

HIV-1 ENV (gp41) antigen reacts strongly with human HIV positive serum and may be used as a positive control for evaluating antibodies to HIV.

### Reagent

This product is supplied as a 1.0 mg/ml solution in a buffer containing 8 M urea, 20 mM Tris-HCl, pH 8.0, and 10 mM  $\beta$ -mercaptoethanol. This product is >95% pure, as determined by SDS-PAGE and spectrophotometry.

## Product Information

### Precautions and Disclaimer

This product is for laboratory research use only. It is not suitable for human therapeutic or diagnostic use. Please consult the Material Safety Data Sheet for handling recommendations before working with this material.

### Storage/Stability

For long term storage, store at  $-20\text{ }^{\circ}\text{C}$ . The solution can be stored at  $2-8\text{ }^{\circ}\text{C}$  for up to four months.

### References

1. Caffrey, M., Model for the structure of the HIV gp41 ectodomain: insight into the intermolecular interactions of the gp41 loop. *Biochim. Biophys. Acta.*, **1536**, 116–122 (2001).
2. Caffrey, M., et al., Biophysical characterization of gp41 aggregates suggests a model for the molecular mechanism of HIV-associated neurological damage and dementia. *J. Bio. Chem.*, **275**, 19877–19882 (2001).
3. Adamson, D. C., et al., Mechanisms and structural determinants of HIV-1 coat protein, gp41-induced neurotoxicity. *J. Neurosci.*, **19**, 64–71 (1999).

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