

T4 UvsY Protein



Catalog #	3572	3575
Package Size	100 µg	500 µg
Volume	25 µl	250 µl
Concentration	2 µg/µl	

Description

Intact Genomics (ig®) UvsY is the phage T4 recombination mediator protein, and structural and biophysical studies provide insights into its role in T4 homologous recombination. During T4 homologous recombination, the UvsX recombinase must compete with the prebound gp32 single-stranded binding protein for DNA-binding sites and UvsY stimulates this filament nucleation event (1). UvsY is a 15.8-kDa protein with properties that are consistent with its role as mediator; it stimulates the DNA-dependent ATPase activity of UvsX, lowers the critical concentration of UvsX that is required for activity, and promotes strand exchange (2, 3). UvsY efficiently promotes the UvsX-catalyzed strand invasion reaction by recruiting to ssDNA-gp32 complexes, promotes the release of gp32, and favors the binding of UvsX.

Protein Purity

The physical purity of this enzyme is ≥98% as assessed by SDS-PAGE with Coomassie® blue staining (Fig. 1).

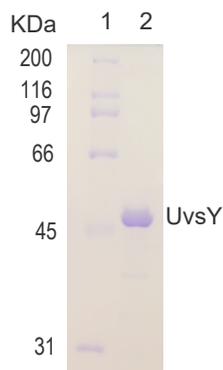


Fig. 1:
Lane 1, Protein marker
Lane 2, UvsY.

Product Source

E. coli BL21 (DE3) strain expressing T4 UvsY gene with an N-terminal GST tag. This GST tag does not have any effect on UvsY activity.

Product Includes

- UvsY protein
- 10x UvsY Reaction Buffer

1x UvsY Reaction Buffer

20 mM Tris-acetate, 100 mM Potassium acetate
10 mM Magnesium acetate, 1 mM DTT
pH 7.8 @ 25°C

Storage Buffer

50 mM Tris-HCl, 50 mM KCl, 1 mM DTT, 0.1 mM EDTA
50% Glycerol, pH 7.5 @ 25°C

Storage Temperature

-20°C

Quality Control Assays

UvsY is free from detectable nuclease activities.

References

1. Beernink HT, Morrical SW. RMPs: Recombination/replication mediator proteins. *Trends Biochem Sci.* 1999;24(10):385–389.
2. Hashimoto K, Yonesaki T. The characterization of a complex of three bacteriophage T4 recombination proteins, uvsX protein, uvsY protein, and gene 32 protein, on single-stranded DNA. *J Biol Chem.* 1991;266(8):4883–4888.
3. Beernink HT, Morrical SW. The uvsY recombination protein of bacteriophage T4 forms hexamers in the presence and absence of single-stranded DNA. *Biochemistry.* 1998;37(16):5673–5681

Related Products

1. T4 gp32 Protein (Cat.# 3515)
2. T4 UvsX Protein (Cat.# 3562, 3565)
3. Bsu DNA Polymerase (Cat.# 3585)
4. Sau DNA Polymerase (Cat.# 3595)
5. Exonuclease III (Cat.# 3415)
6. Exonuclease IV (Nfo) (Cat.# 3425)

Technical Support

Intact Genomics is committed to supporting the worldwide scientific research community by supplying the highest quality reagents. Each new lot of our products is tested to ensure they meet the quality standards and specifications designated for the product. Please follow the instructions carefully and contact us if additional assistance is needed. We appreciate your business and your feedback regarding the performance of our products in your applications.