

Endonuclease IV (Nfo)

Manual

Catalog #	3422	3425
Package Size	2000 units	5000 units
Concentration	10 units/ μ l	10 units/ μ l



Important!

-20°C Storage Required

- * Immediately inspect packages
- * Freeze upon receipt

India Contact:
Life Technologies (India) Pvt. Ltd.
Ph: +91-11-42208000, 42208111, 42208222
Mobile: +91-9810521400
Email: customerservice@lifetechindia.com
www.lifetechindia.com

Intact Genomics, Inc.



visit us online for more
products & custom services

Endonuclease IV (Nfo)

Table of Contents

Product Description.....	3
Applications.....	3
Protein Purity.....	3
Product Source.....	3
Product Components.....	4
1x Endonuclease IV Reaction Buffer.....	4
Storage.....	4
Heat Inactivation.....	4
Unit Definition.....	4
Quality Control.....	4
Related Products.....	5
Ordering Information.....	5
References.....	5
Technical Support.....	6

Description:

Endonuclease IV (Nfo) from *Escherichia coli* is a 32-kD metalloprotein that aids in the repair of damaged DNA. The enzyme functions both as an apurinic/aprimidinic nuclease (1) and as a 3'-terminal di-esterase (1-4). Its 3'-terminal diesterase activity is important in the repair of DNA strand breaks generated by oxidation and ionic radiation (2, 3). In such events, the strand breaks terminate with either a 3' phosphate or a deoxyribose fragment, preventing repair by DNA polymerase I or DNA ligase. Endonuclease IV (Nfo) removes the blocking groups, leaving a free 3'-hydroxyl terminus. This enzyme does not have detectable associated exonuclease or DNA N-glycosylase activity (1).

Applications:

- Single cell gel electrophoresis (Comet assay) (5, 6)
- Alkaline elution (7)
- Alkaline unwinding (8)

Protein Purity:

The physical purity of this enzyme is $\geq 99\%$ as assessed by SDS-PAGE with Coomassie[®] blue staining (see figure below).

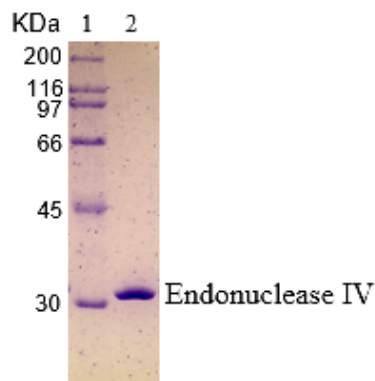


Fig: Lane 1. Protein marker
Lane 2. Endonuclease IV

Product Source:

E. coli BL21 (DE3) strain expressing *E. coli* Endonuclease IV gene.

Product Components:

- Endonuclease IV (Nfo)
- 10x Endonuclease IV reaction buffer

1x Endonuclease IV Reaction Buffer:

50 mM Tris-HCl , 10 mM MgCl₂, 1 mM DTT, 100 mM KCl (pH 7.9 @ 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

Heat Inactivation:

85°C for 20 min

Unit Definition:

One unit is defined as the amount of enzyme required to cleave 1 pmol of a 50-mer oligonucleotide duplex containing a single AP site in a total reaction volume of 10 µl in 1 hour at 37°C.

Quality Control Assays:

Endonuclease IV (Nfo) is free from detectable contaminating nuclease activities.

Related Products:

- T4 UvsX Protein (Cat.# 3562, 3565)
- T4 UvsY Protein (Cat.# 3572, 3575)
- T4 gp32 Protein (Cat.# 3515)
- Bsu DNA Polymerase (Cat.# 3585)
- *Sau* DNA Polymerase (Cat.# 3595)
- Exonuclease III (Cat.# 3415)

Ordering Information:

- Order online within the USA. Place orders on **www.intactgenomics.com** using our secure Shopping Cart.
- Order by email, phone, or fax.
Email: **sales@intactgenomics.com**
Phone: (314) 942-3655 | Toll-free : 855-835-7172 | Fax: (314) 942-3656
- Order via our distributors.

References:

1. Ljungquist, S. (1977) J. Biol. Chem. 252, 2808.
2. Demple, B. et al., (1986) Proc. Natl. Acad. Sci. USA 83, 7731.
3. Levin, J.D. et al., (1988) J. Biol. Chem. 263, 8066.
4. Levin, J.D. et al., (1991) J. Biol. Chem. 266, 22893.
5. Singh, N. et al. (1961). Experimental Cell Research. 175, 184-191.

Intact Genomics owns the following registered trademarks granted by the United States Patent and Trademark Office (USPTO): Intact Genomics®, IG®, ig®, igTherapeutics®, FastAmp®, i7®, DirectPlate®.

All technology protocols discussed within this manual are assumed proprietary to Intact Genomics. This Product may be covered by pending or issued patents or may have certain limitations. Please contact us for more information. Purchase of this material conveys to buyer the non-transferable right to use the material purchased in research conducted by buyer, whether for teaching, non-commercial or commercial research purposes. Buyer may not sell or otherwise transfer these materials, its components, or unmodified descendants to a third party.

Product Use Limitation and Disclaimers

This product is for research purposes only. It is not intended for therapeutic or diagnostic purposes in humans or animals. This product contains chemicals which may be harmful if misused or direct human contact is made.

Intact Genomics is dedicated to practicing and maintaining science and technology ethics. Buyer agrees to use the purchased materials in full compliance with applicable law and regulations.

Technical Support & Customer Services

Intact Genomics (IG®) is dedicated to customer satisfaction regarding the use of our products for your research needs. Each new lot of our products is thoroughly tested to ensure it meets high quality standards and provides excellent results. We appreciate your business and your feedback regarding the performance of our products in your applications. Please follow the instructions carefully and contact us if additional assistance is needed.

Our hours are Monday - Friday, 8AM to 5PM, U.S. Central Standard Time.

Intact Genomics, Inc.

11840 Westline Industrial Drive, Suite 120,
St. Louis, MO. 63146, USA

Phone: (314) 942-3655 | **Toll-free :** 855-835-7172 | **Fax:** (314) 942-3656

Email: sales@intactgenomics.com | ig@intactgenomics.com

Website: www.intactgenomics.com

India Contact:

Life Technologies (India) Pvt. Ltd.
Ph: +91-11-42208000, 42208111, 42208222
Mobile: +91-9810521400
Email: customerservice@lifetechindia.com
www.lifetechindia.com

© 2024 Intact Genomics, Inc
All Rights Reserved

