

CAZyme™ CthXynZ

Technical Specifications



Lucigen Corporation
 2120 W. Greenview Dr.
 Middleton, WI 53562 USA
 Tel. 608-831-9011
 Fax. 608-831-9012
 Web www.lucigen.com
 Email lucigen@lucigen.com

Catalog No. 30535-1 2 mg (0.2 ml)
 Lot No.

Store at 4°C. Do not freeze.
 For *In Vitro* Research Use Only.
 Not for Drug or Diagnostic use. Not for use in humans or animals.

Product Description	CAZyme CthXynZ, thermostable, recombinant expressed in <i>E. coli</i> cells, cloned from <i>Clostridium thermocellum</i> . 10 mg/ml. MW = 37 kDa
Purity	≥90% pure on Coomassie stained SDS-PAGE.
Recommended Reaction Conditions	CAZyme CthXynZ is active between pH 6.0 and 7.0 at 70°C.
Specific Activity	100 units/mg.
Activity Determination	One xylanase unit will produce 1 micromole of reducing sugar per minute at 70°C from a 2% solution of birchwood xylan (Sigma, X-0502) in 50 mM sodium acetate, pH 5.8. Assay method available upon request.
Endoglucanase Activities	CAZyme CthXynZ possesses <i>endo</i> -xylanase, arabinoxylanase and β-glucanase activities. Assay methods available upon request.
Exoglucanase Activities	CAZyme CthXynZ possesses exocellulase, β-xylosidase and β-glucosidase activities. Assay methods available upon request.
Protein Concentration	10 mg/ml total protein as measured using the Bradford protein assay with BSA as standard.
Stability	Store at 4°C. If properly stored at 4°C, this product is guaranteed for 6 months from date of purchase.
Storage Buffer	50 mM Tris-HCl, pH 7.5, 100 mM NaCl, 25% glycerol.

Note: This enzyme is shipped frozen but should be stored at 4°C. Additional freeze/thaw cycles will result in decreased activity.

Warranty

Lucigen warrants that its products will conform to the standards stated in its product specification sheets in effect at the time of shipment. Lucigen will replace, free of charge, any product that does not conform to the specifications. This warranty limits Lucigen's liability only to the replacement of the product. THIS WARRANTY IS EXCLUSIVE, AND LUCIGEN MAKES NO OTHER WARRANTY, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. The stated express warranties, and the remedy provided for breach thereof, are in lieu of all other liability or obligations of Lucigen for any damages whatsoever arising out of or in connection with the delivery, use, performance, or the inability to use any of its products. IN NO EVENT SHALL LUCIGEN BE LIABLE UNDER ANY LEGAL THEORY (INCLUDING BUT NOT LIMITED TO CONTRACT, NEGLIGENCE, STRICT LIABILITY IN TORT, OR WARRANTY OF ANY KIND) FOR ANY INDIRECT, SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR EXEMPLARY DAMAGES (INCLUDING BUT NOT LIMITED TO LOST PROFITS). Without limiting the effect of the preceding sentence, Lucigen's maximum liability, if any, shall not exceed the purchase price paid by buyer for the product.

```

MSGNALRDYAEARGIKIGTTCVNYPFYNNSDPTYNSILQREFSMVVCENEMKFDALQPRQN
VFDFSKGDQLLAFERNQMQRGHTLIWHNQNP SWLTNGNWNRD SLLAVMKNHITTVMTH
YKGIKIVEWDVANECMDDSGNGLRSSIWRNVIGQDYLDYAFRYAREADPDALLFYNDYNI E
DLGPKSNAVFNMIKSMKERGVPIDGVGFQCHFINGMSPEYLA SIDQNIKRYAEIGVIVSF
TEIDIRIPQSENPAFAFQVQANNYKELMKICLANPNCNTFVMWGF TDKYTWIPGTFPGYG
NPLIYDSNYPKPAYNAIKEALMGY

```

Length: 325aa

Theoretical pI: 5.52

Theoretical MW: 37,204 Da

PFAM Structure: GH10

Activity: exo-xylanase

Typical Specific Activity: 22 u/mg

Leader: (-)

Dockerin: (-)

Histag: (-)

CBM6: (-)

1. Herbers, K., Wilke, I., and Sonnewald, U. (1995) A Thermostable Xylanase from *Clostridium thermocellum* Expressed at High levels in the Apoplast of Transgenic Tobacco Has No Detrimental Effects and is Easily Purified. *Nature Biotechnology*. **13**, 63.

Figure 1. Features and sequence of recombinant CAZyme CthXynZ (1).

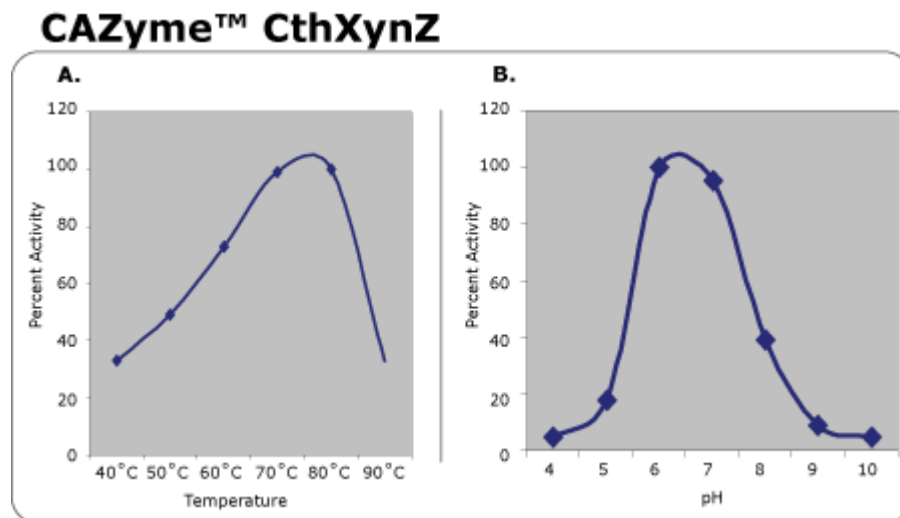


Figure 2. Temperature and pH tolerance of CAZyme CthXynZ. Assay conditions available upon request.