



3050 Spruce Street  
Saint Louis, Missouri 63103 USA  
Telephone 800-325-5832 • (314) 771-5765  
Fax (314) 286-7828  
email: techserv@sial.com  
sigma-aldrich.com

## Product Information

### **Ficin** from fig tree latex

Product Number **F 4125**  
Storage Temperature 2-8 °C

#### **Product Description**

Enzyme Commission (EC) Number: 3.4.22.3  
CAS Number: 9001-33-6  
Molecular Weight: 23.8 kDa<sup>1</sup>  
Extinction Coefficient:  $E^{1\%} = 21.0$  (280 nm)<sup>2</sup>  
PI: 9.0<sup>2</sup>

Ficin is classified as a thiol protease. It contains a single reactive cysteine at its active site. The amino acid homology of the active site is similar to that of papain. Ficin will cleave proteins at the carboxyl side of Gly, Ser, Thr, Met, Lys, Arg, Tyr, Ala, Asn, and Val. The reported  $K_m$  for the chromogenic substrate pGlu-Phe-Leu-p-nitroanilide is 0.43 mM.<sup>3</sup> Ficin is inhibited by iodoacetamide, iodoacetic acid, N-ethylmaleimide, mercuric chloride, DFP (diisopropyl fluorophosphate), TLCK (N $\alpha$ -p-TOSYL-lysine chloromethyl ketone), and TPCK (N-TOSYL-L-phenylalanine chloromethyl ketone)<sup>1,2</sup>

#### **Precautions and Disclaimer**

For Laboratory Use Only. Not for drug, household or other uses.

#### **Preparation Instructions**

This enzyme is soluble in 1.0 M potassium phosphate buffer, pH 7.0 (0.05 mg in 1.0 ml), yielding a clear and colorless solution.

#### **References**

1. Glazer, A. N., and Smith, E. L., in *The Enzymes*, 3rd ed., vol. III, Boyer, P. D., ed., Academic Press (New York, NY: 1971), pp. 538-542.
2. Liener, I. E., and Friedenson, B., Ficin. *Meth. Enzymol.*, **19**, 261-273 (1970).
3. Filippova, I. Y., et al., L-Pyroglutamyl-L-phenylalanyl-L-leucine-p-nitroanilide-a chromogenic substrate for thiol proteinase assay. *Anal. Biochem.*, **143**(2), 293-297 (1984).

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