



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

Chymase from human skin mast cells

Product Number **C9612**
Storage Temperature $-20\text{ }^{\circ}\text{C}$

EC 3.4.21.39

Synonyms: mast cell protease I; skeletal muscle protease; skin chymotryptic proteinase; mast cell serine proteinase, chymase; skeletal muscle (SK) protease¹

Product Description

Chymase is a cathepsin G-like, serine proteinase found primarily in mast cells.² Human mast cell chymase was found to be essentially identical to cardiac chymase.² It has a molecular mass of $\sim 30\text{ kDa}$.

Chymase plays an important role in generating angiotensin II in response to injury of vascular tissues. Inhibition of chymase may be useful for preventing vascular proliferation in grafted vessels.³ Cardiac chymase has been shown to participate directly in the pathophysiologic state after myocardial infarction in hamsters.⁴

Human chymase selectively converts big endothelin 1 to the 31 amino acid length peptide endothelin 1 [ET-1(1-31)]. ET-1(1-31) increases Ca^{2+} concentration and produces NO in endothelial cells through ETB.⁵ Chymase may contribute to development of induced dermatitis by promoting eosinophile infiltration.⁶

This product is supplied as a solution in 50 mM sodium acetate, pH 5.0, with 1 M NaCl.

Specific Activity: ≥ 30 units per mg protein (Bradford)

Unit Definition: One unit will hydrolyze 1.0 μmole of N-benzoyl-L-tyrosine ethyl ester (BTEE) per minute at pH 7.8 at $25\text{ }^{\circ}\text{C}$. The assay buffer used to determine the enzyme activity contains 0.3 M Tris, pH 8.3, with 1.5 M NaCl and 15% ethanol.

Purity: $\sim 95\%$ (SDS-PAGE)

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

This product ships on dry ice and storage at $-20\text{ }^{\circ}\text{C}$ is recommended.

References

1. IUBMB Enzyme Nomenclature
2. Schechter, N.M., J. Immunol., **152**, 4062-9 (1994).
3. Miyazaki, M., and Takai, S.J., Renin Angiotensin Aldosterone Syst., **1**, 23-6 (2000).
4. Jin, D., *et al.*, Life Sci., **71**, 437-46 (2002).
5. Niwa, Y., *et al.*, Life Sci., **67**, 1103-9 (2000).
6. Tomimori, Y., *et al.*, Lab. Invest., **82**, 789-94 (2002).

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