PRODUCT INFORMATION

Enteropeptidase Fluorogenic Substrate (trifluoroacetate salt)

Item No. 22187

Formal Name: (3S,6S,9S,12S,15S)-3-acetamido-19-amino-6,9,12-tris(carboxymethyl)-4,7,10,13-tetraoxo-15-((2-oxo-4-(trifluoromethyl)-2H-chromen-7-yl)carbamoyl)-5,8,11,14-tetraazanonadecanoic acid, trifluoroacetate salt

MF: $C_{34}H_{40}F_3N_7O_{16}$

FW: 859.7

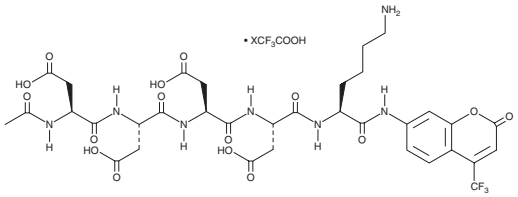
Purity: ≥95%

UV/Vis.: λ_{max}: 234, 340 nm

Supplied as: A crystalline solid

Storage: -20°C

Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Enteropeptidase fluorogenic substrate (trifluoroacetate salt) is supplied as a crystalline solid. A stock solution may be made by dissolving the enteropeptidase fluorogenic substrate (trifluoroacetate salt) in the solvent of choice, which should be purged with an inert gas. Enteropeptidase fluorogenic substrate (trifluoroacetate salt) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of fluorogenic substrate (trifluoroacetate salt) in ethanol is approximately 10 mg/ml and approximately 30 mg/ml in DMSO and DMF.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of enteropeptidase fluorogenic substrate (trifluoroacetate salt) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of enteropeptidase fluorogenic substrate (trifluoroacetate salt) in PBS, pH 7.2, is approximately 2.5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Enteropeptidase fluorogenic substrate is a substrate for enteropeptidase that contains a 7-amino-4-trifluoromethylcoumarin (AFC) moiety. Enteropeptidase is a serine protease expressed in the proximal small intestine of higher animals that converts inactive trypsinogen to active trypsin by endoproteolytic cleavage.[1,2] Enteropeptidase recognizes the highly specific amino acid sequence DDDDK on the fluorogenic substrate and cleaves after the lysine residue, releasing the AFC moiety. Enteropeptidase activity is quantified by fluorescent detection of AFC, which displays excitation/emission spectra of 400/505 nm.

References

1. Pepeliaev, S., Krahulec, J., Černý, Z., *et al. J. Biotechnol.* **156(1)**, 67-75 (2011).
2. Choi, M.-G., Lee, S., Chung, H.-S., *et al. BMB Rep.* **44(7)**, 458-461 (2011).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM