Dissociation Reagents

Collagenase Type V

For digestion of native collagen fibrils

Catalog #	07430	100 mg
	07431	1 g

STEMCELL™ TECHNOLOGIES
Scientists Helping Scientists™ | WWW.STEMCELL.COM
TOLL FREE PHONE 1 800 667 0322 • PHONE +1 604 877 0713
INFO@STEMCELL.COM • TECHSUPPORT@STEMCELL.COM
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Product Description

Collagenase is a protease consisting of a single polypeptide chain approximately 1,000 amino acid residues in length. Collagenase is capable of digesting native collagen fibrils commonly found in connective tissues and therefore is frequently used for tissue dissociation. Collagenase preparations contain the activity of several proteases, including collagenase, caseinase, clostripain, and trypsin (Kessler & Yaron). Collagenase Type V contains high levels of collagenase and caseinase activities.

Product Information

Alternative Names:	Clostridium histolyticum collagenase; Collagenase 5; Collagenase Type 5; Collagenase V
Format:	Lyophilized powder
Storage:	Store at 2 - 8°C.
Stability:	Stable as supplied for 12 months from date of receipt.
Reconstitution:	Dissociation reagents can be reconstituted in a balanced salt solution or buffer of choice.
Molecular Weight:	68 - 130 kDa
CAS Number:	9001-12-1
Optimum pH:	6.3 - 8.5
Cleavage Site:	-Pro-X- † -Gly-Pro-Y- : X = neutral Y = nonspecific

Specifications

Source:	Clostridium histolyticum
Activity:	Collagenase: ≥ 450 CDU/mg dry weight (mgdw); Caseinase: ≥ 450 u/mgdw; Clostripain: ≤ 3.0 u/mgdw; Trypsin: ≤ 0.3 u/mgdw. See Notes for further information.

Related Products

For a complete list of dissociation reagents, as well as related products available from STEMCELL Technologies, please visit our website at www.stemcell.com or contact us at techsupport@stemcell.com.

Notes

ACTIVITY UNITS
Collagenase: 1 collagenase digestion unit (CDU) equals 1 µmol of L-leucine equivalents released from collagen in 5 hours at 37°C, pH 7.5.
Caseinase: 1 unit equals 1 µmol of L-leucine equivalents released from 25 mg vitamin-free casein in 5 hours at 37°C, pH 7.5. Measures non-specific proteolytic activity.
Clostripain: 1 unit hydrolyzes 1 µmol of Nα-benzoyl-L-arginine ethyl ester (BAEE)/minute at 25°C at pH 7.6, after activation in 2.5 mM dithiothreitol (DTT).
Trypsin: 1 unit hydrolyzes 1 µmol of BAEE/minute at 25°C at pH 7.6.

References

Barrett AJ & Starkey PM. (1973) The interaction of a2-macroglobulin with proteinases. J Biochem 133: 709–24.
Kessler E & Yaron A. (1973) A novel aminopeptidase from clostridium histolyticum. Biochem Biophys Res Commun 50(2): 405–12.