Dissociation Reagents

Collagenase Type II

For digestion of native collagen fibrils

Catalog #	07418	100 mg
	07419	1 g

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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 II contains high levels of protease activity, especially clostripain, and has been used for the dissociation of tissues such as lung (You & Brody; Comhair et al.), kidney (Valente et al.), liver (Linghor et al.), and thymus (Vandenabeele et al.), as well as dissociation of endothelial cells (Patel et al.) and mesenchymal stem cells (Steigman & Fauza).

Product Information

Alternative Names:	Clostridium histolyticum collagenase; Collagenase 2; Collagenase Type 2; Collagenase II
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: ≥ 125 CDU/mg dry weight (mgdw); Caseinase: ≥ 200 u/mgdw; Clostripain: ≥ 3.5 u/mgdw; Trypsin: ≥ 0.1 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.

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