Dissociation Reagents

Dispase, ACF

Animal component-free non-specific protease

Catalog # 07446

10 mg

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Product Description

Dispase, Animal Component-Free (ACF) is a neutral, amino-endoprotease that cleaves the N-terminal peptide bond of non-polar amino acid residues and is obtained from cultures free of animal-derived materials. Dispase has mild proteolytic activity, which makes it especially useful for the isolation and passaging of primary cells. Its proteolytic activity also allows it to maintain membrane integrity. Dispase is commonly used with other proteases such as collagen in cell isolation and for dissociation of tissues such as neural (Dietrich et al.), kidney (Presnell et al.), epithelial (Smoot et al.), endothelial (Müller et al.), lung (Barkauskas et al.), and colon (Roig et al.), as well as dissociation of stem cells (Thomson et al.; Salmon et al.).

Product Information

Alternative Names:	Neutral protease; Proteinase
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:	32.5 kDa
CAS Number:	42613-33-2
Optimum pH:	5.9 - 7.0
Cleavage Site:	-X- † -Leu/Phe- † -Y- : X/Y = nonspecific

Specifications

Source:	Bacillus polymyxa
Activity:	≥ 4 units/mg dry weight. 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
1 unit releases 1 µmol folin-positive amino acids equivalent to 1 µmol tyrosine/minute from casein at 37°C, pH 7.5.

References

Barkauskas CE et al. (2013) Type 2 alveolar cells are stem cells in adult lung. J Clin Invest 123(7): 3025–36.
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Presnell SC et al. (2011) Isolation, characterization, and expansion methods for defined primary renal cell populations from rodent, canine, and human normal and diseased kidneys. Tissue Eng C, Methods 17(3): 261–73.
Roig AI et al. (2010) Immortalized epithelial cells derived from human colon biopsies express stem cell markers and differentiate in vitro. Gastroenterology 138(3): 1012–21.e5.
Salmon B et al. (2013) MEPE-derived ASARM peptide inhibits odontogenic differentiation of dental pulp stem cells and impairs mineralization in tooth models of X-linked hypophosphatemia. PLoS One 8(2): e56749.
Smoot DT et al. (2000) A method for establishing primary cultures of human gastric epithelial cells. Methods Cell Sci 22(2-3): 133–6.
Thomson JA. (1998) Embryonic stem cell lines derived from human blastocysts. Science 282(5391): 1145–7.