

hCELA3A, His-tag (S217A)

Cat. no. P2020-129

Product Information

Protein:	hCELA3A-His (S217A) (30.1 kDa)
Uniprot#:	P09093
Sequence:	MSGYGGPPSSHSSSRVHGEDAVPYSWPWQVSLQYEKSGSFYHTCGGSLIAPDWVVTAGHCISRDLTYQVVLGEYNLAVKEGPEQVIPINSEELFVHPLWNRSCVACGNDIALIKLSRSAQLGDAVQLASLPPAGDILPNKTPCYITGWGRLYTNGPLPDKLQQARLPVVDYKHCSRWNWWGSTVKKTMVCAGGYIRSGCNGDAGGPLNCPTEDGGWQVHGVTSFVSAFGCNFIWKPTVFTRVSAFIDWIEETIASHVLVPRGSAAALE
	Methionine at pos. 1 might be present due to cloning constraints, C-terminal His-tag not shown in sequence.
Source:	Recombinantly expressed in HEK293 cells.
Tag(s):	His-tag, C-terminal
Purification:	Purified by affinity chromatography and subsequent buffer exchange.
Formulation:	PBS; pH 7.4
	Liquid, stored and shipped at -80 °C.
Purity:	> 90 % (will be determined by densitometry of Coomassie stained gel, example next page)
Concentration:	Will be determined by BCA-Assay.
Long-term storage:	No recommendations.
Comment:	Protein migrates at higher molecular weight during SDS-PAGE due to posttranslational modifications.

Background Information:

Chymotrypsin-like elastases (CELAs) are pancreatic serine proteinases. This enzyme belongs to the peptidase S1 family which is subfamily of serine proteases. The human CELA3A is a member of the elastase family, which consists of the six human elastase genes. The next proteins elastase 1, 2, 2A, 2B, 3A, and 3B are structurally similar and encoded by elastase genes which are known in human. The human pancreas does not express CELA1 but secretes two CELA3 isoforms, CELA3A and CELA3B as a zymogen and has a digestive function in the intestine, very similar to other serine proteases such as trypsin, chymotrypsin and kallikrein. Peptidase S1 domain is included in the structure of CELA3A and hydrolyzing many proteins in addition to elastin. hCELA3A is the product of gene duplication and shares 92% identity in their primary structure. The amino acid S217 of CELA3A is part of the catalytic triade typical for all serin proteases. By substitution of this amino acid by a different one (S217A), the enzyme is loosing its catalytic activity.



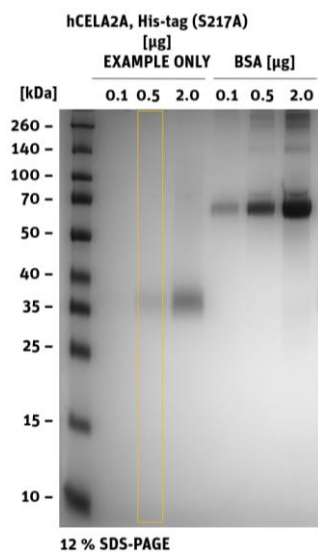
*Structural model of the CELA3A protein
(Example: porcine pancreatic elastase, pdb
code:1BMA).*

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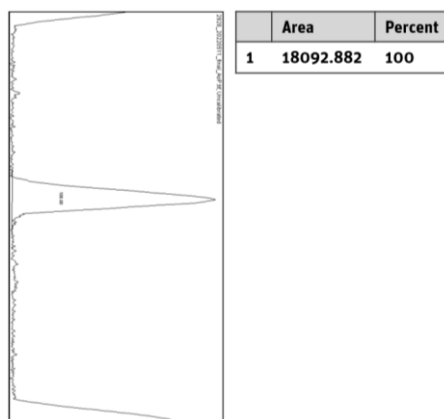
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Product Information

Quality Information (provided for each lot):



SDS-PAGE/Coll.Coomassie



Histogram (of marked lane in gel picture)