

Chymotrypsin Assay Kit (Fluorometric) ab234051

[1 References](#) [6 Images](#)

Overview

| | |
|--------------------|--|
| Product name | Chymotrypsin Assay Kit (Fluorometric) |
| Detection method | Fluorescent |
| Sample type | Cell Lysate, Tissue Lysate |
| Species reactivity | Reacts with: Mammals, Other species |
| Product overview | Chymotrypsin Assay Kit (Fluorometric) (ab234051) uses a synthetic fluorogenic substrate, enabling kinetic measurement of chymotrypsin activity in cell and tissue lysates. A chymotrypsin activator cleaves chymotrypsinogen to form active chymotrypsin, which then hydrolyzes the non-fluorescent substrate to release a stable fluorophore. The kit includes a selective chymotrypsin inhibitor that can be used to measure specific chymotrypsin activity in samples containing non-specific proteases and endopeptidases that may also metabolize the substrate. The assay can detect as low as 0.01 mU of Chymotrypsin. |
| Notes | <p>This product is manufactured by BioVision, an Abcam company and was previously called K352 Chymotrypsin Activity Assay Kit (Fluorometric). K352-100 is the same size as the 100 test size of ab234051.</p> <p>Chymotrypsin (EC 3.4.21.1) is a key serine protease involved in dietary protein digestion in mammals. It is primarily produced by the pancreas, but may be expressed in other tissues, including spleen and liver. In the pancreas, chymotrypsin is initially expressed as the inactive proenzyme chymotrypsinogen, which is cleaved by other proteases to chymotrypsin, its active form. Chymotrypsin specifically cleaves peptide bonds at the C-terminal end of bulky hydrophobic or aromatic amino acids (such as tyrosine, tryptophan or phenylalanine).</p> |
| Platform | Microplate reader |

Properties

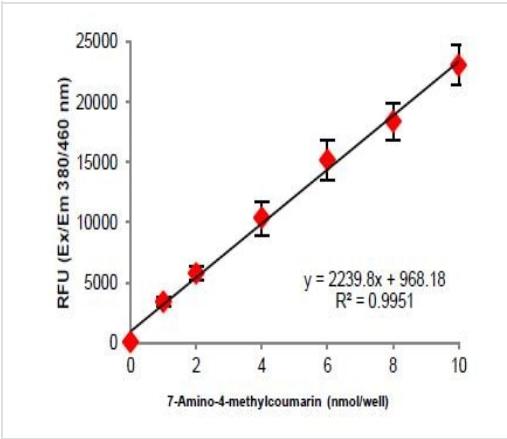
Storage instructions Store at -20°C. Please refer to protocols.

| Components | 100 tests |
|------------------------|-----------|
| AMC Standard | 1 x 100µl |
| Assay Buffer I | 1 x 25ml |
| Chymotrypsin Activator | 1 vial |

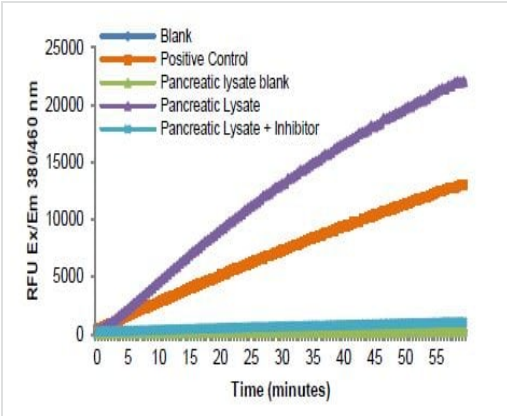
| Components | 100 tests |
|-------------------------------|-----------|
| Chymotrypsin Inhibitor I | 1 x 80µl |
| Chymotrypsin Positive Control | 1 vial |
| Chymotrypsin Substrate | 1 x 200µl |

| | |
|------------------------|--|
| Function | Has chymotrypsin-type protease activity and hypocalcemic activity. |
| Tissue specificity | Pancreas. |
| Involvement in disease | Variations in CTRC influence susceptibility to chronic pancreatitis [MM:167800]. Chronic pancreatitis is a persistent inflammatory disorder characterized by permanent destruction of the pancreatic parenchyma. |
| Sequence similarities | Belongs to the peptidase S1 family. Elastase subfamily. Contains 1 peptidase S1 domain. |

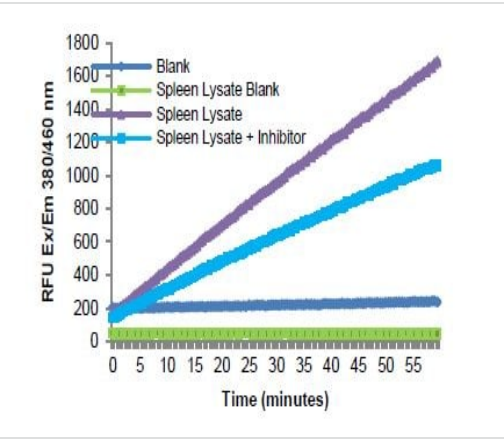
Images



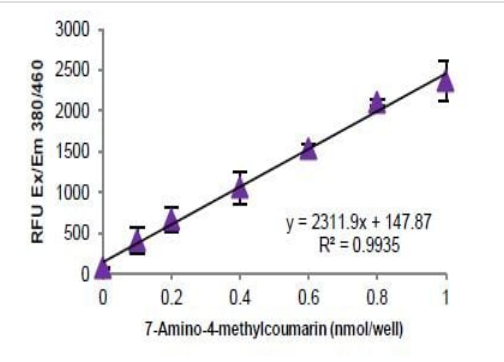
Coumarin standard curves showing a range of 0-10 nmol/well.



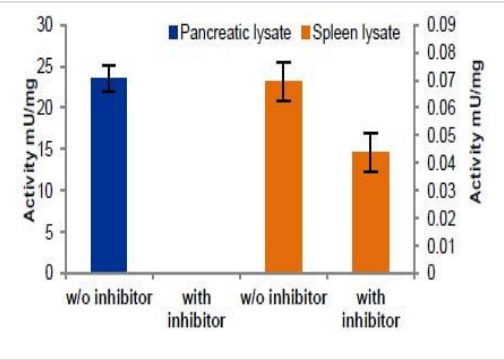
Reaction kinetics for positive control and rat pancreatic lysate (9 µg).



Reaction kinetics for rat spleen lysate (160 µg).

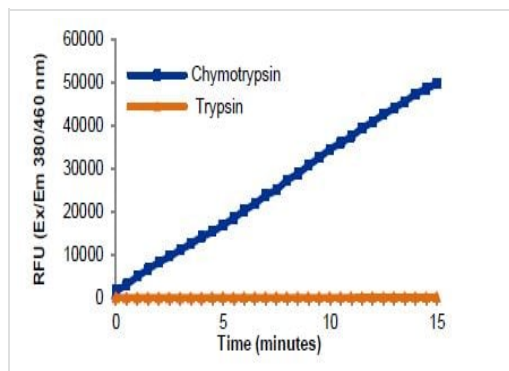


Coumarin standard curves showing a range of 0-1 nmol/well.



Chymotrypsin activity with and without inhibitor in rat pancreas and rat spleen.

The presence of non-specific chymotrypsin-like proteases in spleen leads to some activity in presence of the selective chymotrypsin inhibitor.



The substrate is cleaved by chymotrypsin but not trypsin, making the assay free from trypsin interference.

Reaction kinetics using substrate in the presence of Chymotrypsin or Trypsin.

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