abcam

Product datasheet

MMP Activity Assay Kit (Fluorometric - Red) ab112147

9 References 4 Images

Overview

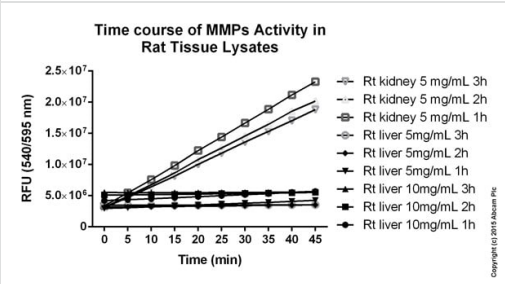
Product name	MMP Activity Assay Kit (Fluorometric - Red)
Detection method	Fluorescent
Sample type	Purified protein, Tissue Lysate
Assay type	Direct
Species reactivity	**Reacts with:** Mammals, Other species
Product overview	MMP Activity Assay Kit (Fluorometric Red) ab112147 uses a fluorescence resonance energy transfer (FRET) peptide as a MMP substrate. In the intact FRET peptide, the fluorescence of one part is quenched by the other. Upon cleavage into two separate fragments by MMPs, the fluorescence is recovered. The MMP assy is designed to check the general activity of a MMP enzyme in a tissue sample. It can also be used to screen MMP inhibitors when a purified MMP enzyme is used. With excellent fluorescence quantum yield and longer wavelength, the substrate used in this assay shows less interference from autofluorescence of test compounds and cellular components and is much more sensitive than an EDANS/Dabcyl FRET substrate. The MMP assay signal can be easily read by a fluorescence microplate reader at Ex/Em = 540/590 nm. The pH-independent fluorescence makes the assay reading available for the whole physiological pH range. The high photostability of this FRET peptide provides a useful imaging probe. Many labs have used this kit for the high throughput screening of MMP inhibitors as potential anticancer drug candidates. This assay might be also used for monitoring cancer cells.
Notes	ab112147 should be stored Desiccated Abcam has not and does not intend to apply for the REACH Authorisation of customers' uses of products that contain European Authorisation list (Annex XIV) substances. It is the responsibility of our customers to check the necessity of application of REACH Authorisation, and any other relevant authorisations, for their intended uses.
Platform	Microplate reader

Properties

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

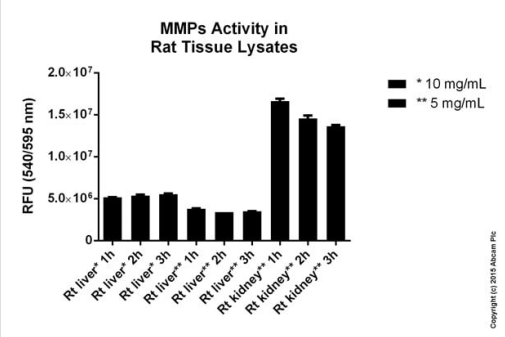
Components	100 tests
APMA, 4-Aminophenylmercuric Acetate	1 x 20µl
Assay Buffer	1 x 20ml
MMP Red Substrate	1 x 60µl

Images



Detection of MMPs activity using ab112147

Tissues were lysed with RIPA buffer and activated with 2 mM APMA (1:1) for 1,2 and 3 hours at 37°C. Samples were then diluted to 5 mg/mL and 10 mg/mL with Assay Buffer. 50 µl of MMP containing sample was mixed with MMP Red Substrate. The fluorescence signal was monitored 30 min after the start of the reaction by using a microplate reader with a filter set of Ex/Em = 540/595 nm. The reading from all wells was subtracted with the reading from substrate control, which contains MMP Red Substrate but no MMPs.



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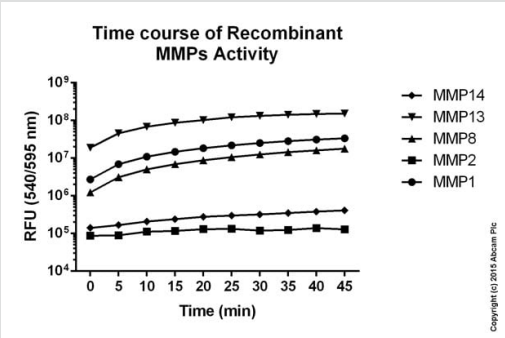
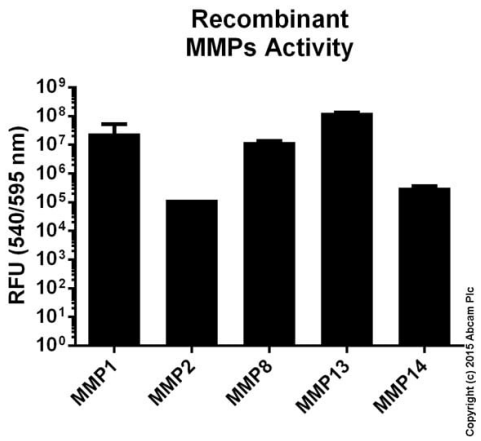


Detection of MMPs activity using ab112147

MMPs were activated with 2 mM APMA (1:1). Samples were then diluted to 0.6 µg/mL (30 ng per well) with Assay Buffer. 50 µl of MMP containing sample was mixed with MMP Red Substrate. The fluorescence signal was monitored 30 min after the start of the reaction by using a microplate reader with a filter set of Ex/Em = 540/595 nm. The reading from all wells was subtracted with the reading from substrate control, which contains MMP Red Substrate but no MMPs.



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