Datasheet for ABIN1882391

SensoLyte® 520 Aggrecanase-1 Assay Kit

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Overview

Quantity:	1 kit
Target:	ADAMTS4
Application:	Fluorescence Resonance Energy Transfer Microscopy (FRET)

Product Details

Brand:	SensoLyte®
Detection Method:	Fluorometric
Characteristics:	The SensoLyte® 520 Aggrecanase-1 Assay Kit uses 5-FAM as the fluorophore and TAMRA as the quencher in the FRET peptide substrate. This substrate is used for continuous measurement of the enzyme activity. In an intact FRET peptide, the fluorescence of 5-FAM is quenched by TAMRA. Upon the cleavage of the FRET peptide by ADAMTS-4, the fluorescence of 5-FAM is recovered, and can be continuously monitored at excitation/emission = 490 nm/520 nm. Increase in FAM fluorescence is correlated to aggrecanase-1 activity. 5-FAM/TAMRA based FRET substrate is less interfered by autofluorescence of test compounds due to its longer emission wavelength. The kit can be used to detect the activity of aggrecanase-1 or screen for aggrecanase inhibitors. The assays are performed in a convenient 96-well format.

Target Details

Target:	ADAMTS4
Alternative Name:	Aggrecanase-1 (ADAMTS4 Products)
Background:	Aggrecanases belong to ADAMTS (A disintegrin and metalloprotease with thrombospondin

Target Details

motif) family of proteases. Aggrecanases cleave aggrecan, the major structural component of cartilage. Aggrecanase-1 (ADAMTS-4) is a major aggrecanase in human osteoarthritic cartilage.

Application Details

Comment:	FRET-based Assay Kit
Restrictions:	For Research Use only

Handling

Handling Advice:	Protect Components A and B from light and from moisture.
Storage:	-20 °C
Storage Comment:	Store all kit components at -20 °C. Components C and E can be stored at room temperature for convenience.

Publications

Product cited in:

Lemarchant, Pruvost, Hébert, Gauberti, Hommet, Briens, Maubert, Gueye, Féron, Petite, Mersel, do Rego, Vaudry, Koistinaho, Ali, Agin, Emery, Vivien: "tPA promotes ADAMTS-4-induced CSPG degradation, thereby enhancing neuroplasticity following spinal cord injury." in: **Neurobiology of disease**, Vol. 66, pp. 28-42, (2014) (PubMed).

Wainwright, Bondeson, Caterson, Hughes: "ADAMTS-4_v1 is a splice variant of ADAMTS-4 that is expressed as a protein in human synovium and cleaves aggrecan at the interglobular domain." in: **Arthritis and rheumatism**, Vol. 65, Issue 11, pp. 2866-75, (2013) (PubMed).

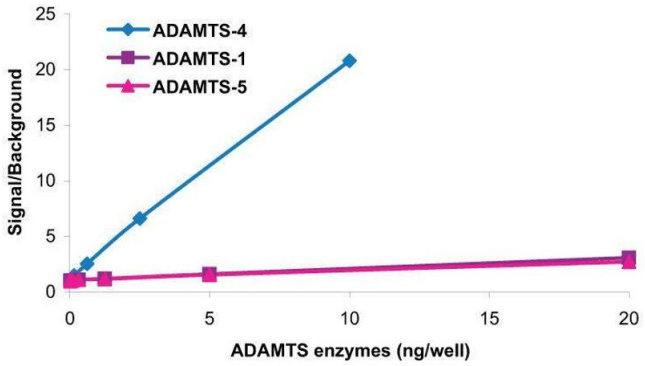
Tauchi, Imagama, Natori, Ohgomori, Muramoto, Shinjo, Matsuyama, Ishiguro, Kadomatsu: "The endogenous proteoglycan-degrading enzyme ADAMTS-4 promotes functional recovery after spinal cord injury." in: **Journal of neuroinflammation**, Vol. 9, pp. 53, (2012) (PubMed).

Moncada-Pazos, Obaya, Viloria, López-Otín, Cal: "The nutraceutical flavonoid luteolin inhibits ADAMTS-4 and ADAMTS-5 aggrecanase activities." in: **Journal of molecular medicine (Berlin, Germany)**, Vol. 89, Issue 6, pp. 611-9, (2011) (PubMed).

Peng, Duan, Liu, Shen, Li, Yan, Li, Ding: "Structure-activity study on a series of ?-glutamic acid scaffold based compounds as new ADAMTS inhibitors." in: **Bioorganic & medicinal chemistry**

letters, Vol. 21, Issue 15, pp. 4457-61, (2011) (PubMed).

Images



ELISA

Image 1.