

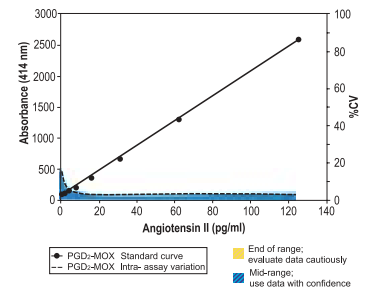
EIA assays

Following EIA assay kits are well documented, i.e. for crossreactivities. Please inquire. All are based on AchE detection method, excepted Kit #BQ6530 which is a FPIAssay based on a EDANS/DABCYL substrate.

Description	Qty : 96 wells	Qty : 5 x 96 wells
Atriopeptin (rat) EIA Kit	BP4570	
50-80% B/B0: 190-60 pg/ml (o Oxytocin reactivity)		
Angiotensin II EIA Kit	HF6110	
Sensib.: 1.5 pg/ml		
Endothelin-1 EIA kit	166325	166324
Sensib.: 1.5 pg/ml (detects ET-1, -2, -3, Sarafotoxin, VIC)		
AcSDKP EIA Kit	BM6531	
50-80% B/B0: 2.0 nM-0.2nM (3-18Hr)		
PAF Acetylhydrolase Assay Kit	Q91581	
0.02-0.2µmol/min/ml working range		
Renin Inhibitor Screening Assay kit	BQ6530	
FPIA		

See also :

CardioTACS™ Kit - 820540 - in section (E156)/Apoptosis
See also Ab Research Area #3(Hematopoietic markers)



Calibration curve of kit #HF6110

Technical tip

Renin Inhibitor Screening Assay Kit

Renin is an aspartyl protease of approximately 40 kDa that is released in active form from renal juxtaglomerular cells in response to sodium depletion, decreased blood volume and blood pressure, and b-adrenergic stimulation. 1 2 3 Renin catalyzes the initial and rate limiting step in the renin-angiotensin system (RAS) pathway, converting angiotensinogen into angiotensin I. Angiotensin Converting Enzyme (ACE) subsequently converts angiotensin I to angiotensin II, which is a potent vasoconstrictor. The Renin Inhibitor Screening Assay Kit provides a convenient assay in a 96-well format for evaluating human renin inhibitors. The assay utilizes a renin-based synthetic peptide substrate which incorporates the fluorophore EDANS at one end and an EDAN-quenching molecule (Dabcy) at the other end. 4 After cleavage by renin, the peptide-EDANS product is released yielding bright fluorescence which can be easily analyzed using excitation wavelengths of 335-345 nm and emission wavelengths of 485-510 nm. The assay kit includes recombinant human renin (sufficient for 100 reactions), substrate, buffers, and complete instructions.

Atriopeptin (rat) EIA Kit

Atriopeptin is an 28 amino acid peptide synthesised primarily in cardiac atria. This peptide hormone acts in opposition to angiotensin II regulating renal, hemodynamic, and endocrine function. Atriopeptin has a relatively short plasma half-life of 2-3 minutes due to renal filtration, receptor-mediated clearance, and cleavage by plasma endopeptidase. The normal plasma atriopeptin levels are from 18-30 pg/ml. The detection limit of this assay is 62.05 pg/ml.

AcSDKP EIA Kit

N-Acetyl Ser-Asp-Lys-Pro (AcSDKP) is a tetrapeptide growth regulatory hormone, which inhibits the proliferation of hematopoietic stem cells.

PAF Acetylhydrolase Assay Kit

Platelet-activating factor (PAF) is a biologically active phospholipid synthesized by a variety of cells upon stimulation. PAF is converted to the biologically inactive lyso-PAF by the enzyme PAF acetylhydrolase (PAF-AH). The assay uses 2-thio PAF, which serves as a substrate for PAF-AH. Upon hydrolysis of the acetyl thioester bond at the sn-2 position by PAF-AH, free thiols are detected using 5,5'-dithiobis(2-nitrobenzoic acid) (DTNB; Ellman's reagent). The dynamic range of the assay is only limited by the accuracy of the absorbance measurement. Most plate readers are linear to an absorbance of 1.2. The detection range of the assay is from 0.02 to 0.2 µmol/min/ml of PAF-AH activity, which is equivalent to an absorbance increase of 0.01 to 0.1 per minute. Each kit contains assay buffer, DTNB, 2-thio PAF (substrate), human PAF-AH standard, a 96 well plate, and complete instructions.

Technical tip

Haematology biomarkers

Atriopeptin is an 28 amino acid peptide synthesised primarily in cardiac atria. This peptide hormone acts in opposition to angiotensin II regulating renal, hemodynamic, and endocrine function. Atriopeptin has a relatively short plasma half-life of 2-3 minutes due to renal filtration, receptor-mediated clearance, and cleavage by plasma endopeptidase. The normal plasma atriopeptin levels are from 18-30 pg/ml.

Angiotensin II is a primary reactive vasoconstrictor, the main stimulus for aldosterone release, and one of the causative factors in chronic hypertension. Normal human plasma angiotensin II levels range from 10-30 pg/ml when measured at rest in the supine position.

Endothelin-1 (ET-1) is a 21 amino acid peptide originally isolated from the supernatant of cultured porcine aortic endothelial cells and is one of the most potent vasoconstrictors currently known. The endothelin family peptide family consists of three isoforms, ET-1 (corresponding to the initially isolated and most predominant isoform), ET-2 and ET-3.

AcSDKP (N-Acetyl Ser-Asp-Lys-Pro) is a tetrapeptide growth regulatory hormone, which inhibits the proliferation of hematopoietic stem cells.

Platelet-activating factor (PAF) is a biologically active phospholipid synthesized by a variety of cells upon stimulation. PAF is converted to the biologically inactive lyso-PAF by the enzyme PAF acetylhydrolase (PAF-AH).

Renin is an aspartyl protease of approximately 40 kDa that is released in active form from renal juxtaglomerular cells in response to sodium depletion, decreased blood volume and blood pressure, and α-adrenergic stimulation[1 2 3]. Renin catalyzes the initial and rate limiting step in the renin-angiotensin system (RAS) pathway, converting angiotensinogen into angiotensin I. Angiotensin Converting Enzyme (ACE) subsequently converts angiotensin I to angiotensin II, which is a potent vasoconstrictor. [1] Imai, T., Miyazaki, H., Hirose, S., et al. Cloning and sequence analysis of cDNA for human renin precursor. Proc Natl Acad Sci USA 80, 7405-7409 (1983). [2] Cartledge, S., Lawson, N. Aldosterone and renin measurements. Ann Clin Biochem 37, 262-278 (2000). [3] Persson, P.B. Renin: Origin, secretion and synthesis. J Physiol 552.3, 667-671 (2003). [4] Wang, G.T., Chung, C.C., Holzman, T.F., et al. A continuous fluorescence assay of renin activity. Anal Biochem 210, 351-359 (1993).

Cell Biology - Assays Kits

Hematology / Cardiology / Urology

Ready Blots Kidney Protein Explorer®

INTERNAL STRUCTURE OF THE KIDNEY

Source: <http://terryfly.usd.edu/ingleson/interior/kidney.jpg>



Acquisition of animal or human kidney tissue is not only time-consuming and expensive, but also requires expertise and training in kidney anatomy, cell and molecular biology. Anatomically and functionally distinct areas of kidney were carefully dissected and processed for the study of proteins using Western blots. The kidney proteins have been electrophoresed, electro-blotted, and blocked. A lane of pre-stained mol. wt markers is included in each blot to assist you in identifying the size of the proteins.

Description	Cat.#	Qty
Adult Mouse ReadyBlot Kidney Protein Explorer (Mouse : Swiss Webster, ~10 wks old, mixed gender)	BP6970	1 u
Adult Rat ReadyBlot Kidney Protein Explorer (Rat : Sprague-Dawley, ~ 8 wks old, mixed gender)	BP6980	1 u

Kits for hematology

Product	Cat.#	Quantity	Applications
PEFAKIT PICT	BF7350	1 kit	Pefakit PICT is a plasma based functional assay for the determination of factor Xa and factor IIa inhibitors
PEFAKIT PICT calibrator UFH	BG7810	1 kit	calibrator plasma for calibration of the plasma based functional assay for quantification of unfractionated heparins (UFH) with Pefakit PICT
PEFAKIT PICT calibrator LMWH	BG7800	1 kit	calibrator plasma for calibration of the plasma based functional assay for quantification of low molecular weight heparins (LMWH) with Pefakit PICT
PEFAKIT PICT controls UFH	BF7370	1 kit	control plasmas containing unfractionated heparin (UFH) for the plasma based functional assay Pefakit PICT
PEFAKIT PICT controls LMWH	BF7360	1 kit	control plasmas containing low molecular weight heparins (LMWH) for the plasma based functional assay Pefakit PICT
PEFAKIT APC-R FACTOR V LEIDEN	AT8470	1 kit	Pefakit APC-R factor V Leiden is a plasma based functional assay for the determination of resistance of factor Va to inactivation by activated protein C (APC) caused by the factor V Leiden mutation
PEFAKIT APC-R FACTOR V LEIDEN controls	AT8480	1 kit	control plasmas for confirmation of factor V Leiden mutation in assays for determination of the functional phenotype for activated protein C resistance caused by the factor V Leiden mutation
PEFAKIT reptilase time	BR4990	1 kit	for the investigation of the last of blood coagulation. Due to its heparin insensitivity the reptilase time can detect fibrinogen polymerization disorders even in the presence of heparin
PEFAKIT Factor XIII incorporation assay	993010	1 kit	pefakit FXIII incorporation assay is a plasma based functional assay for the determination of coagulation factor XIIIa activity
PEFAKIT TAFI	BR5010	1 kit	Pefakit TAFI is a plasma based chromogenic assay for determination of Thrombin Activatable Fibrinolysis enzyme activity
PEFAKIT TAFI controls and calibrator	BR5020	1 kit	calibrator and control plasmas for calibration and control of the plasma based chromogenic assay for determination of Thrombin Activatable Fibrinolysis Inhibitor enzyme activity with Pefakit TAFI

See also
 Angiogenin EIA Assay # BQ1630
 Ferritin EIA Assay # BQ1710
 B Microglobulin EIA Assay # BQ1670

Biochemically active compounds for hematology

Highly purified proteins, isolated from snake venoms. For use as specific activators of serine proteases or platelet functions.

Protac

MW : 36000 to 42000

Acts on : protein C

Application :

Protac, a single chain glycoprotein, is a fast-acting protein C activator isolated from the venom of the copperhead snake *Agkistrodon contortrix*. It rapidly converts protein C of man and other vertebrates into activated protein C which may be determined either by measuring its prolonging effect on the activated partial thromboplastin time (APTT) or by measuring its enzyme activity by means of a specific chromogenic substrate. Protac is therefore used for the determination of protein C and protein S levels in plasma.

Description	Cat.#	Qty
Protac	872400	3 vials

Ecarin

MW : 55000 to 60000

Acts on : prothrombin

Application :

Determination of prothrombin levels in patients undergoing anticoagulant therapy. Based on the interaction of hirudin with meizothrombin a simple ecarin clotting test for the monitoring of hirudin levels has been developed (Nowak and Bucha, 1993). Due to its action on a carboxy prothrombin, ecarin can be used for the determination of a carboxy prothrombin in the supernatant of barium sulfate treated patient plasma where normal carboxylated prothrombin has been removed by adsorption. Ecarin can be used for the detection of low prothrombin concentrations in plasma fractions for quality- and in-process control purposes. Ecarin, used in conjunction with the phospholipid- and calcium ion-dependent prothrombin activator Textarin[®] from *Pseudonaja textilis* venom, forms a highly sensitive and specific test system for lupus anticoagulant (Triplett et al., 1993).

Description	Cat.#	Qty
Ecarin	D04260	1 vial

Noscarin

MW : 54000

Acts on : prothrombin

Application :

The prothrombin activator present in the venom of the mainland tiger snake (*Notechis scutatus*) cleaves the Arg274-Thr275 and Arg323-Ile324 bonds of bovine prothrombin. Prethrombin and meizothrombin occur as intermediates during prothrombin activation. This venom activity on prothrombin is greatly stimulated by the presence of Ca²⁺, phospholipids and FVa. This activator slowly converts factor Xa specific chromogenic substrates.

Description	Cat.#	Qty
Noscarin	BM3180	50 u

Batroxobin

MW : 43000

Acts on : fibrinogen

Application :

Due to its specific action on fibrinogen and its ability to clot platelet-rich plasma without affecting the integrity and functions of the platelets, and thanks to its insensitivity to thrombin inhibitors, batroxobin has found several applications as a tool in blood coagulation research and diagnosis. Batroxobin can be used to determine fibrinogen in plasma, to measure the batroxobin clotting time (Reptilase_® time) as a heparin-insensitive parallel to the thrombin time, to investigate dysfibrinogenemia, and to test the contractile system of platelets.

Description	Cat.#	Qty
Batroxobin	P36491	1 vial

Cell Biology - Assays Kits

Hematology / Cardiology / Urology

Thrombocytin

MW : 36000

Acts on : platelets

Application :

Thrombocytin-induced platelet aggregation is inhibited by prostaglandin E, antithrombin III and heparin, however, not by the specific thrombin inhibitor hirudin. Thrombocytin may therefore be used for testing platelet function in plasma of hirudintreated patients and laboratory animals.

Description	Cat.#	Qty
Thrombocytin	703200	1 vial

Botrocetin

MW : 22000

Acts on : vwf dependant platelets

Application

Botrocetin may be used for the assay of vWF in plasma. Botrocetin acts also on animal platelets and vWF, which qualifies this agent for diagnostic procedures in veterinary medicine and for studying vWF dependent reactions in laboratory animals. In contrast to ristocetin, which only reacts with higher molecular weight multimers of FVIII/vWF, the reactivity of Botrocetin covers a broad range of multimers

Description	Cat.#	Qty
Botrocetin	188500	100 u

Proteinase A

MW : 23500

Acts on : alpha2-antiplasmin and alpha2-macroglobulin

Application :

Proteinase A is an alpha2-antiplasmin and alpha2-macroglobulin-inactivating proteinase isolated from the venom of the Mexican west coast rattlesnake (*Crotalus basiliscus*). Proteinase A can be used to inhibit the effect of alpha2-antiplasmin and alpha2-macroglobulin. Furthermore, Proteinase A has strong fibrinolytic activity.

Description	Cat.#	Qty
Proteinase A	BM3170	1 mg

RW-X

MW : 120000

Acts on : factor X

Application :

RVV-X is used in diagnostic procedures to quantitatively convert the zymogen factor X into factor Xa which can be determined by means of a clotting assay or photometrically, using a synthetic chromogenic substrate. RVV-X activator is used in testing of lupus anticoagulants.

Description	Cat.#	Qty
RVV-X	R46200	50 u

RW-V

MW : 28000

Acts on : factor V

Application :

RVV-V is a specific factor V activator from Russell's viper venom. Activated factor V is not stable and loses its activity within 20 hours at 37 °C. Therefore, RVV-V is used to destabilize and selectively inactivate factor V in plasma and thus to prepare a routine reagent for the factor V determination.

Description	Cat.#	Qty
RVV-V	U48430	1000 u

Convulxin

MW : 84000

Acts on : platelets

Convulxin from *Crotalus durissus terrificus* is a protein, which can activate mammalian platelets via binding and clustering of GPVI-receptor under physiological conditions,

Description	Cat.#	Qty
Convulxin	R83690	50 ug