

## ACE-inhibitor compliance & AcSDKP ELISA #A05881

### KEY INFORMATION

- ACE-inhibitors compliance
- Biomarker of Prolyl Oligopeptidase (POP) activity
- Simple measurement with an ELISA kit



### GENERAL INFORMATION

The tetrapeptide N-acetyl-seryl-aspartyl-lysyl-proline (AcSDKP) was first discovered thanks to its endogenous regulatory function in hematopoiesis which reverses stem cells and normal early progenitors into S-phase.

Next, further studies demonstrate its role as biomarker of ACE inhibition, of particular usefulness in clinical trials when ACE are prescribed.

Nowadays, the main research focus is on its preventive role in fibrosis (in heart, kidney or liver), as demonstrated by the recent works of several teams. As AcSDKP is produced by the action of Prolyl oligopeptidase (POP) from thymosin- $\beta$ 4, POP becomes a new drug target for fibrosis treatment, in the context of growing concern around NASH/NAFLD.

### FOCUS ON OUR EIA KIT

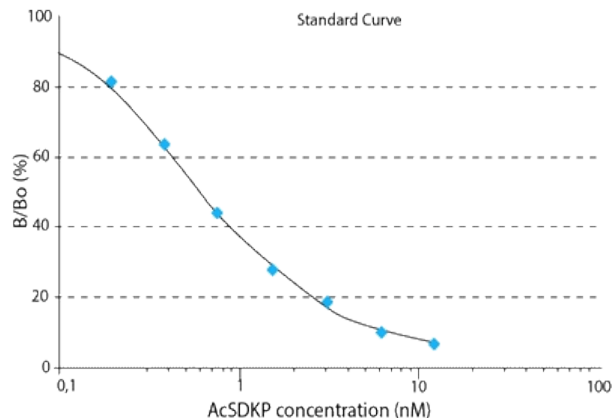
The principle of this Enzyme ImmunoAssay (ELISA):

A specific monoclonal anti-Rabbit IgG is immobilized on a 96 well plate to fix the AcSDKP antiserum added into the well. AcSDKP free (from sample or standard) or AcSDKP tracer (labelled with acetylcholinesterase AChE) are added together into the well and competing to bind the antisera. After washing, the AChE-labelled tracer can react with Ellman's reagent (enzymatic substrate for AChE and chromogen) to form a yellow compound.

The coloration is inversely proportional to the concentration of free AcSDKP.

## ACSDKP EIA KIT

• AcSDOP	500 %
• AcSDKP	100 %
• AcSDRP	100 %
• AcADKP	6 %
• SDKP	0.5 %
• Thymosin $\beta$ 4	<0.02 %
• AcSDK	<0.03 %
• AcSDKPDC	<0.01 %
• TNF $\alpha$	<0.01 %
• AcSDKPY	<0.01%



- Format: Competitive EIA
- Tracer label : AChE®
- Stability: 18 months
- Sample volume: 50  $\mu$ L
- Storage: -20° C
- Limit of detection: 0.1 nM
- Shipping: Dry ice
- Size: 96 wells
- Plasma: Long immunological reaction (18H 4°C) 0,09-12,5 nM
- Standard curve range: Short immunological reaction (3H RT): 0.19-25 nM

**Media Application:** Plasma, urine & blood cells

**Preanalytical phase:** Blood collection with captopril  
Plasma/Serum: purification using methanol precipitation  
Blood cells: methanol precipitation  
Urine: no extraction required

## REFERENCES

16. Kumar N., Nakagawa P., JanicB., Romero CA., Worou ME., Monu SR., Peterson EL., Shaw L., Valeriote F., Onger EM., Niyitegeka JMV., Rhaleb NE., and Carretero OA.

Zhou D., Wang J., HE L.N. et al. The anti-inflammatory peptide Ac-SDKP is released from thymosin- $\beta$ 4 by renal meprin- $\alpha$  and prolyl oligopeptidase.

*Am J Physiol Renal Physiol* 310: F1026–F1034 (2016)

17. Zhou D., Wang J., HE L.N. et al.

Prolyl oligopeptidase attenuates hepatic stellate cell activation through induction of Smad7 and PPAR- $\gamma$ .

*Experimental and Therapeutic Medicine*, 13, 780-786 (2017)

## RELATED PRODUCTS

*Rat Albumin EIA kit*

cat# A05102

*Rat Atriopeptin EIA kit*

cat# A05103

*Angiotensin II EIA kit*

cat# A05880