



BMA BIOMEDICALS



Peninsula Laboratories

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## S-1536

### Dynorphin A (3-14) ELISA

Dynorphins are a class of opioid peptides. As their precursor Proenkephalin-B is cleaved during processing, its residues 207-223 (Dynorphin A) and 226-238 (Rimorphin, Dynorphin B) are released, among others. Dynorphin A (1-13) is conserved among various species. Dynorphin A (3-14) is the major fragment of Dynorphin A (1-17) produced in inflamed tissue. It inhibits NF- $\kappa$ B/p65 activation in response to Lipopolysaccharide (LPS) stimulation.

Dynorphins contain a high proportion of basic and hydrophobic residues. They are widely distributed in the central nervous system, with highest concentrations in the hypothalamus, medulla, pons, midbrain, and spinal cord, where they are also produced. Dynorphins are stored in large dense-core vesicles characteristic of opioid peptides storage.

Dynorphins exert their effects primarily through the  $\kappa$ -opioid receptor (KOR), a G-protein-coupled receptor. They are part of the complex molecular changes in the brain leading to cocaine addiction. Dynorphins are important in maintaining homeostasis through appetite control, circadian rhythms and the regulation of body temperature. However, Dynorphin derivatives are generally considered to be of little clinical use because of their very short duration of action.

This ELISA was developed with serum from rabbits immunized with Dynorphin A (3-14) coupled to a carrier protein.

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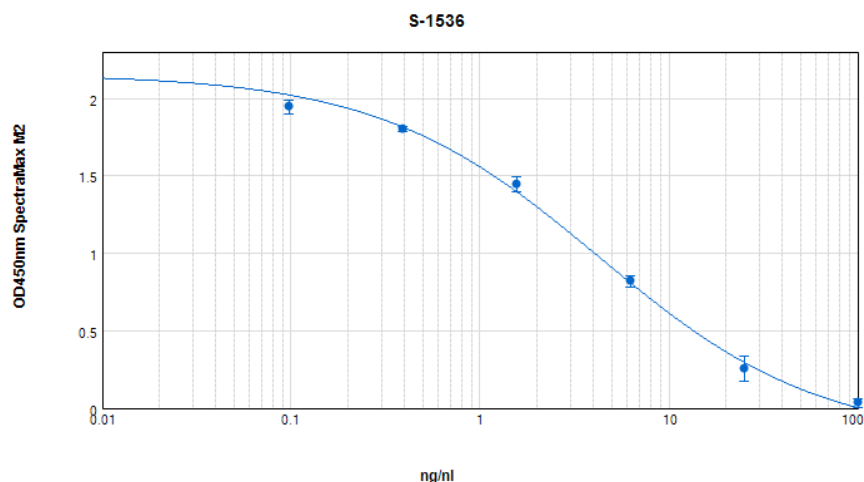
### TECHNICAL AND ANALYTICAL CHARACTERISTICS

<b>Lot number:</b>	A17171
<b>Host species:</b>	Rabbit IgG
<b>Quantity:</b>	96 tests
<b>Format:</b>	Formulated for extracted samples (EIAH type).
<b>Shelf-life:</b>	One year from production date. Store refrigerated at 4° - 8°C.
<b>Applications:</b>	This ELISA has been validated with the included reagents. It is intended to be used with appropriately extracted samples (original protocol III, Std.Ab1hr.Bt). For research use only. Please see <a href="http://www.bma.ch">www.bma.ch</a> for protocols and general information.
<b>Range:</b>	0-100ng/ml
<b>Average IC50:</b>	4ng/ml
<b>Immunogen:</b>	Synthetic peptide H-Gly-Phe-Leu-Arg-Arg-Ile-Arg-Pro-Lys-Leu-Lys-Trp-OH coupled to carrier protein.

#### Cross-Reactivity:

Peptide:	%:
Dynorphin A (3-14)	100

Typical titration curve of Dynorphin A (3-14) in a competitive ELISA with this antibody:



<b>Suggested Preparation of Standards</b>		
	ng/ml	Range: 0.10 to 100ng/ml
<b>Stock</b>	1000	
<b>S1</b>	100.00	Add 100µl Stock + 900µl diluent
<b>S2</b>	25.00	Add 200µl S1 + 600µl diluent
<b>S3</b>	6.25	Add 200µl S2 + 600µl diluent
<b>S4</b>	1.56	Add 200µl S3 + 600µl diluent
<b>S5</b>	0.39	Add 200µl S4 + 600µl diluent
<b>S6</b>	0.10	Add 200µl S5 + 600µl diluent
<b>S0</b>	0.00	500µl diluent

Related Products: T-4278: anti Dynorphin A (1-13), diluted antiserum  
T-4279: anti Dynorphin A (1-13), purified rabbit IgG  
T-4280: anti Dynorphin A (1-13), neat antiserum  
T-4875: anti Dynorphin A (3-14), neat antiserum

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This product contains Thimerosal as a preservative and is intended for laboratory use and research purposes only. Purchase of this product does not include authorization to use it in diagnostic or therapeutic applications.

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EIAH

9.12.2020