

Datasheet: AHP373

Description:	RABBIT ANTI HUMAN DYNORPHIN A (aa1-17)
Specificity:	DYNORPHIN A (aa1-17)
Format:	Serum
Product Type:	Polyclonal Antibody
Isotype:	Polyclonal IgG
Quantity:	0.1 ml

Product Details

Applications

This product has been reported to work in the following applications. This information is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information. For general protocol recommendations, please visit www.bio-rad-antibodies.com/protocols.

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry			▪	
Immunohistology - Frozen	▪			1/100 - 1/1500
Immunohistology - Paraffin (1)	▪			
ELISA			▪	
Immunoprecipitation			▪	
Western Blotting			▪	
Radioimmunoassays	▪			1/10,000

Where this antibody has not been tested for use in a particular technique this does not necessarily exclude its use in such procedures. Suggested working dilutions are given as a guide only. It is recommended that the user titrates the antibody for use in their own system using appropriate negative/positive controls.

(1) This product requires antigen retrieval using heat treatment prior to staining of paraffin sections. Sodium citrate buffer pH 6.0 is recommended for this purpose.

Overnight incubation is recommended for paraffin sections.

Target Species	Human
Species Cross Reactivity	Reacts with: Pig, Rat, Rhesus Monkey N.B. Antibody reactivity and working conditions may vary between species.
Product Form	Serum - liquid
Antiserum Preparation	Antisera to Dynorphin A 1-17 were raised by repeated immunisation of rabbits with highly purified antigen. Whole serum is supplied - diluted.
Buffer Solution	Phosphate buffered saline
Preservative Stabilisers	0.09% Sodium Azide 0.1% Bovine Serum Albumin
Immunogen	Dynorphin A 1-17: Tyr-Gly-Gly-Phe-Leu-Arg-Arg-Ile-Arg-Pro-Lys-Leu-Lys-Trp-Asp-Asn-Gln (porcine)

External Database**Links****UniProt:**

[P01213](#) [Related reagents](#)

Entrez Gene:

[5173](#) PDYN [Related reagents](#)

Specificity

Rabbit anti Human dynorphin A antibody recognizes the opioid peptide dynorphin A ([Fischli et al. 1982](#)), a cleavage product of big dynorphin, itself derived from the precursor pro-enkephalin-B, also known as prodynorphin. Rabbit anti human dynorphin A antibody binds to both dynorphin A 1-17 and 1-8 but not with other big dynorphin cleavage products such as dynorphin B, also known as rimorphin.

Dynorphin A immunoreactive cells are found in the paraventricular and supraoptic nucleus and in hippocampal mossy fibers of rat brain following kainic acid administration and colchicine induced neurotoxicity ([McGinty et al. 1983](#)). Dynorphins play a role in multiple physiologic processes including pain perception ([Wang et al. 2001](#)) and responses to stress ([Rácz et al. 2013](#)). They mimic and compete with a number of opiate drugs ([Chavkin 2013](#)). Dysregulation of dynorphin A expression has been linked to progression of neurodegenerative conditions such as Alzheimer's disease ([Yakovleva et al. 2007](#)) and appears to play a significant role in the pathobiology of epilepsy ([Loacker et al. 2007](#)).

Rabbit anti human dynorphin antibody has been used successfully for the immunohistochemical demonstration of 'mossy fibre' sprouting in hippocampal sclerosis ([Thom et al. 2009](#)) and in a virally induced disease model in the rat ([Solbrig et al. 2006](#)).

References

1. Khachaturian, H. *et al.* (1985) Prodynorphin peptide immunocytochemistry in rhesus monkey brain. [Peptides. 6 Suppl 2: 155-66.](#)
 2. Sherman, T.G. *et al.* (1988) Regulation of hypothalamic magnocellular neuropeptides and their mRNAs in the Brattleboro rat: coordinate responses to further osmotic challenge. [J Neurosci. 8 \(10\): 3785-96.](#)
 3. Zardetto-smith, A.M. *et al.* (1988) Lateral hypothalamic dynorphinergic efferents to the amygdala and brainstem in the rat. [Peptides. 9 \(5\): 1121-7.](#)
 4. Beck, H. *et al.* (2000) Synaptic plasticity in the human dentate gyrus. [J Neurosci. 20 \(18\): 7080-6.](#)
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 6. Solbrig, M.V. *et al.* (2006) Kappa opioid control of seizures produced by a virus in an animal model. [Brain. 129: 642-54.](#)
 7. Jeub, M. *et al.* (1999) Loss of dynorphin-mediated inhibition of voltage-dependent Ca²⁺ currents in hippocampal granule cells isolated from epilepsy patients is associated with mossy fiber sprouting. [Neuroscience. 94: 465-71.](#)
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 9. Knapp, P.E. *et al.* (2001) Endogenous opioids and oligodendroglial function: possible autocrine/paracrine effects on cell survival and development. [Glia. 35: 156-65.](#)
 10. Dougherty, K.J. *et al.* (2009) Phenotypic Diversity and Expression of GABAergic Inhibitory Interneurons During Postnatal Development in Lumbar Spinal Cord of GAD67-GFP Mice. [Neuroscience. 163: 909-19.](#)
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Storage

Store at +4°C or at -20°C if preferred.

This product should be stored undiluted.

Storage in frost free freezers is not recommended. Avoid repeated freezing and thawing as this may denature the antibody. Should this product contain a precipitate we recommend microcentrifugation before use.

Shelf Life	18 months from date of despatch.
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Health And Safety Information	Material Safety Datasheet documentation #10041 available at: 10041: https://www.bio-rad-antibodies.com/uploads/MSDS/10041.pdf
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Regulatory	For research purposes only
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Related Products

Recommended Secondary Antibodies

Sheep Anti Rabbit IgG (STAR34...) [FITC](#)
Sheep Anti Rabbit IgG (STAR35...) [RPE](#)
Goat Anti Rabbit IgG (H/L) (STAR124...) [HRP](#)
Goat Anti Rabbit IgG (Fc) (STAR121...) [Biotin](#), [FITC](#), [HRP](#)
Sheep Anti Rabbit IgG (2AB02...) [Biotin](#)
Sheep Anti Rabbit IgG (STAR36...) [DyLight®488](#), [DyLight®549](#), [DyLight®649](#),
[DyLight®680](#), [DyLight®800](#)

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