

Datasheet: 8450-0505

**BATCH NUMBER 167181**

<b>Description:</b>	RAT ANTI SUBSTANCE P
<b>Specificity:</b>	SUBSTANCE P
<b>Format:</b>	S/N
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	NC1/34
<b>Isotype:</b>	IgG2a
<b>Quantity:</b>	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](http://www.bio-rad-antibodies.com/protocols).

	Yes	No	Not Determined	Suggested Dilution
Immunohistology - Frozen	▪			1/100 - 1/200
Immunohistology - Paraffin (1)	▪			1/100 - 1/200
Immunofluorescence	▪			

Where this product 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 product for use in their own system using appropriate negative/positive controls.

**(1)This product does not require antigen retrieval prior to staining of formalin fixed, paraffin embedded sections.**

### Species Cross Reactivity

Reacts with: Pig, Pigeon, Bichir, Rabbit, Human, Bovine, Guinea Pig, Calanus sp., Cancer sp., Panilurus sp., Homarus sp., Mudpuppy, Lamprey, Crayfish, Zebrafish, Bullfrog, Cockroach, Sheep, Cowbird, Rat, Spadefoot toad, Chicken, Chinchilla, Camel, Beaver, Chinchilla

Based on sequence similarity, is expected to react with:Mammals, Crustacea, Amphibia  
**N.B.** Antibody reactivity and working conditions may vary between species. Cross reactivity is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information.

<b>Product Form</b>	Tissue Culture Supernatant - liquid
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<b>Preservative Stabilisers</b>	0.09% Sodium Azide (NaN <sub>3</sub> )
<b>Immunogen</b>	Substance P conjugated to bovine serum albumin.
<b>External Database Links</b>	<p><b>UniProt:</b>  <a href="#">P20366</a>    <a href="#">Related reagents</a></p> <p><b>Entrez Gene:</b>  <a href="#">6863</a>    TAC1    <a href="#">Related reagents</a></p>
<b>Synonyms</b>	NKA, NKNA, TAC2
<b>RRID</b>	AB_2200292
<b>Fusion Partners</b>	Spleen cells from immunized Wistar rat were fused with cells of the NS1/1-Ag 4-1 myeloma cell line.
<b>Specificity</b>	<p><b>Rat anti substance P antibody, clone NC1/34</b> recognizes the COOH terminal region of substance P, an eleven amino acid polypeptide neurotransmitter derived by proteolytic cleavage of protachykinin-1. Substance P binds to and activates the neurokinin-1 receptor. Substance P is a highly conserved neurotransmitter expressed throughout the animal kingdom. It is highly expressed in the spinal cord dorsal horn and dorsal root ganglia, but not in the ventral horn (<a href="#">Ribeiro-da-Silva and Hökfelt 2000</a>). It is also expressed in non-neuronal cells including microglia and other immune cells.</p> <p>Substance P has a role in several physiologic activities such as pain transmission, the vomiting reflex, salivary secretion and smooth muscle contraction (<a href="#">Hökfelt 2004</a>).</p> <p>Rat anti substance P antibody, clone NC1/34 demonstrates ~5% reactivity with eledoisin a neurotransmitter identified in the octopus Genus <i>Eledone</i>. It does not react with Leu or Met-enkephalin, somatostatin or beta-endorphin in tested applications.</p>
<b>References</b>	<ol style="list-style-type: none"> <li>Kozsurek, M. <i>et al.</i> (2009) Nonselective innervation of lamina I projection neurons by cocaine- and amphetamine-regulated transcript peptide (CART)-immunoreactive fibres in the rat spinal dorsal horn. <a href="#">Eur J Neurosci. 29: 2375-87.</a></li> <li>Cuello, A.C. <i>et al.</i> (1980) Use of monoclonal antibodies in immunocytochemistry with special reference to the central nervous system. <a href="#">Brain Res Bull. 5 (5): 575-87.</a></li> <li>Pioro, E.P. <i>et al.</i> (1985) Loss of substance P immunoreactivity in the nucleus of the spinal trigeminal tract after intradural tumour compression of the trigeminal nerve. <a href="#">Neurosci Lett. 58: 7-12.</a></li> <li>Mai, J.K. <i>et al.</i> (1986) Substance P in the human brain. <a href="#">Neuroscience. 17 (3): 709-39.</a></li> <li>Cuello, A.C. <i>et al.</i> (1979) Detection of substance P in the central nervous system by a monoclonal antibody. <a href="#">Proc Natl Acad Sci U S A. 76 (7): 3532-6.</a></li> <li>Czujkowska, H. &amp; Arciszewski, M.B. (2011) Expression of corticotropin releasing factor (CRF) in the enteric nervous system of the jejunum of sheep <a href="#">Veterinarni medicina 56: 551-60.</a></li> </ol>

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Valve Projecting Sensory Neurons in the Dorsal Root Ganglia and the Influence of Lipopolysaccharide from Different Serotypes of *Salmonella* spp. on the Chemical Coding of DRG Neurons in the Cell Cultures. [Int J Mol Sci. 19 \(9\): 2551.](#)

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**Storage** This product is shipped at ambient temperature. It is recommended to aliquot and store at -20°C on receipt. When thawed, aliquot the sample as needed. Keep aliquots at 2-8°C for short term use (up to 4 weeks) and store the remaining aliquots at -20°C.

Avoid repeated freezing and thawing as this may denature the antibody. Storage in frost-free freezers is not recommended.

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**Guarantee** 12 months from date of despatch

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**Health And Safety Information** Material Safety Datasheet documentation #10053 available at: <https://www.bio-rad-antibodies.com/SDS/8450-0505>  
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**Regulatory** For research purposes only

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## Related Products

### Recommended Secondary Antibodies

Rabbit Anti Rat IgG (STAR16...)	<a href="#">DyLight®800</a>
Rabbit Anti Rat IgG (STAR17...)	<a href="#">FITC</a>
Goat Anti Rat IgG (STAR72...)	<a href="#">HRP</a>
Goat Anti Rat IgG (STAR69...)	<a href="#">FITC</a>
Goat Anti Rat IgG (STAR73...)	<a href="#">RPE</a>
Rabbit Anti Rat IgG (STAR21...)	<a href="#">HRP</a>
Goat Anti Rat IgG (MOUSE ADSORBED) (STAR71...)	<a href="#">DyLight®550</a> , <a href="#">DyLight®650</a> , <a href="#">DyLight®800</a>
Goat Anti Rat IgG (STAR131...)	<a href="#">Alk. Phos.</a> , <a href="#">Biotin</a>

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