

Datasheet: 8450-0004

Description:	RABBIT ANTI HUMAN SUBSTANCE P
Specificity:	SUBSTANCE P
Format:	Purified
Product Type:	Polyclonal Antibody
Isotype:	Polyclonal IgG
Quantity:	0.5 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
Immunohistology - Frozen	▪			1/50 - 1/200
Immunohistology - Paraffin (1)	▪			1/50 - 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 the 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.

Target Species	Human
Species Cross Reactivity	Reacts with: Chicken, Mouse N.B. Antibody reactivity and working conditions may vary between species.
Product Form	Purified IgG - liquid
Preparation	Purified IgG prepared by affinity chromatography on Protein G
Buffer Solution	Phosphate buffered saline
Preservative Stabilisers	0.09% Sodium Azide (NaN ₃)
Approx. Protein Concentrations	5.0mg/ml
Immunogen	Synthetic substance P conjugated to Keyhole limpet hemocyanin.
External Database Links	UniProt: P20366 Related reagents

Entrez Gene:[6863](#) TAC1 [Related reagents](#)

Synonyms NKA, NKNA, TAC2

Specificity **Rabbit anti Human Substance P antibody** recognizes human Protachykinin-1, also known as PPT. Protachykinin-1 is a 129 amino acid ~15kDa tachychinin involved in the excitation of neurons. Protachykinin-1 can be cleaved into a number of chains including substance P, neurokinin A, neuropeptide K, neuropeptide γ and c-terminal flankning peptide. Rabbit anti Human Substance P antibody recognizes an epitope withing the substance P region of the molecule. There are potentially four isoforms of Protachykinin-1 (α - δ) formed by alternative splicing, all containing the substance P peptide region ([UniProt: P20366](#)).

Rabbit anti Human Substance P antibody stains substance P secreting cells of the external median eminence of the hypothalamus and specific cells of the GI tract. Rabbit anti Human Substance P antibody also stains neuronal structures.

Histology Positive Control Tissue Appendix

- References**
1. Cheng, C. *et al.* (2010) Dynamic plasticity of axons within a cutaneous milieu. [J Neurosci. 30 \(44\): 14735-44.](#)
 2. Nguyen, J. *et al.* (2014) Morphine stimulates cancer progression and mast cell activation and impairs survival in transgenic mice with breast cancer. [Br J Anaesth. pii: aeu090.](#)
 3. Jouml;nsson, M. *et al.* (2005) Substance P and the neurokinin-1 receptor in relation to eosinophilia in ulcerative colitis. [Peptides. 26: 799-814.](#)
 4. Bjur, D. *et al.* (2005) The innervation pattern of the human Achilles tendon: studies of the normal and tendinosis tendon with markers for general and sensory innervation. [Cell Tissue Res. 320: 201-6.](#)
 5. Andersson, G. *et al.* (2007) Nerve-related characteristics of ventral paratendinous tissue in chronic Achilles tendinosis. [Knee Surg Sports Traumatol Arthrosc. 15: 1272-9.](#)
 6. Danielson, P. *et al.* (2006) Distribution of general (PGP 9.5) and sensory (substance P/CGRP) innervations in the human patellar tendon. [Knee Surg Sports Traumatol Arthrosc. 14: 125-32.](#)
 7. Grimsholm, O. *et al.* (2008) Observations favouring the occurrence of local production and marked effects of bombesin/gastrin-releasing peptide in the synovial tissue of the human knee joint – Comparisons with substance P and the NK-1 receptor. [Neuropeptides. 42: 133-45.](#)
 8. Grimsholm, O. *et al.* (2007) Are neuropeptides important in arthritis? Studies on the importance of bombesin/GRP and substance P in a murine arthritis model. [Ann N Y Acad Sci. 1110: 525-38.](#)
 9. Danielson, P. *et al.* (2008) Marked sympathetic component in the perivascular innervation of the dorsal paratendinous tissue of the patellar tendon in arthroscopically treated tendinosis patients. [Knee Surg Sports Traumatol Arthrosc. 16: 621-6.](#)
 10. Backman, L.J. *et al.* (2011) Substance P is a mechanoresponsive, autocrine regulator of human tenocyte proliferation. [PLoS One. 6: e27209.](#)
 11. Danielson, P. *et al.* (2007) Studies on the importance of sympathetic innervation, adrenergic receptors, and a possible local catecholamine production in the development of patellar tendinopathy (tendinosis) in man. [Microsc Res Tech. 70: 310-24.](#)
 12. Mousavizadeh, R. *et al.* (2014) Dexamethasone decreases substance P expression in human tendon cells: an *in vitro* study. [Rheumatology \(Oxford\). pii: keu315.](#)
 13. Pinto, F.M. *et al.* (2015) Analysis of the Expression of Tachykinins and Tachykinin Receptors in the Rat Uterus During Early Pregnancy. [Biol Reprod. pii: biolreprod.115.130617.](#)
 14. González-Santana, A. *et al.* (2016) Altered expression of the tachykinins substance P/neurokinin A/hemokinin-1 and their preferred neurokinin 1/neurokinin 2 receptors in uterine

leiomyomata. [Fertil Steril. 106 \(6\): 1521-9.](#)

Storage	Store at +4°C or at -20°C if preferred. Storage in frost-free freezers is not recommended. This product should be stored undiluted. Avoid repeated freezing and thawing as this may denature the antibody.
Shelf Life	18 months from date of despatch.
Health And Safety Information	Material Safety Datasheet documentation #10040 available at: 10040: https://www.bio-rad-antibodies.com/uploads/MSDS/10040.pdf
Regulatory	For research purposes only

Related Products

Recommended Secondary Antibodies

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

Recommended Useful Reagents

[ANTIGEN RETRIEVAL BUFFER, pH8.0 \(BUF025A\)](#)
[ANTIGEN RETRIEVAL BUFFER, pH8.0 \(BUF025C\)](#)

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