

**AM01289SU-N****Monoclonal Antibody to Substance P - Supernatant**

<b>Alternate names:</b>	Substance-P
<b>Quantity:</b>	0.1 ml
<b>Background:</b>	<p>Substance P (SP) is currently thought to be one of the most important neurotransmitters and neurotransmitters in the brain. It is an undecapeptide belonging to the tachykinin family, which consists of excitatory neuropeptides synthesised in neuronal and glial cells of the human central and peripheral nervous system. Substance P, Neurokinin A, Neuropeptide K, and Neuropeptide gamma are all generated by post-translation cleavage of the precursor Protachykinin-1. Substance P forms the major endogenous ligand for Neurokinin 1 Receptor. The pharmacology of Substance P has been associated with a number of neurological and psychiatric disorders, namely nociception, migraine, asthma, nausea, inflammatory bowel syndrome, urinary incontinence, anxiety and depression. It has also been linked to obesity.</p>
<b>Uniprot ID:</b>	<a href="#">P20366</a>
<b>NCBI:</b>	<a href="#">NP_003173</a>
<b>GeneID:</b>	<a href="#">6863</a>
<b>Host / Isotype:</b>	Rat / IgG2a
<b>Clone:</b>	NC1/34
<b>Immunogen:</b>	<p>Substance P conjugated to Bovine Serum Albumin. <b>Remarks:</b> Spleen cells from immunised Wistar rat were fused with cells of the NS1/1-Ag 4-1 myeloma cell line.</p>
<b>Format:</b>	<b>State:</b> Liquid Tissue Culture Supernatant containing 0.09% Thiomersal
<b>Applications:</b>	<p><b>Immunohistochemistry on Frozen Sections:</b> 1/100-1/200. <b>Immunohistochemistry on Paraffin Sections:</b> 1/100-1/200 (Pre-treatment is not required). <b>Immunofluorescence:</b> This antibody has been used for the localisation of Substance P in tissue sections by immunofluorescence and PAP staining in nervous systems of experimental animals and man. Please refer to the Cuello references listed below. It has also been successfully applied in archive post-mortem tissues of the Human brain, see Mai and Pioro references. Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.</p>
<b>Specificity:</b>	<p>This antibody recognizes the COOH terminal end of Substance P, a short polypeptide neurotransmitter that regulates the excitability of dorsal horn nociceptive neurons. 5% reactivity is observed with Eledoisin. It does not react with Leu or Met-Enkephalin, Somatostatin or beta-Endorphin.</p>

**Storage:** Store the antibody undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer.  
Avoid repeated freezing and thawing.  
Shelf life: one year from despatch.

**General Readings:**

1. Cuello AC, Milstein C, Priestley JV. Use of monoclonal antibodies in immunocytochemistry with special reference to the central nervous system. *Brain Res Bull.* 1980 Sep-Oct;5(5):575-87. PubMed PMID: 6159056.
2. Pioro EP, Hughes JT, Cuello AC. Loss of substance P immunoreactivity in the nucleus of the spinal trigeminal tract after intradural tumour compression of the trigeminal nerve. *Neurosci Lett.* 1985 Jul 4;58(1):7-12. PubMed PMID: 2413396.
3. Mai, J.K. et al. (1986) Substance P in the human brain. *Neuroscience* 17: 709-739.
4. Cuello AC, Galfré G, Milstein C. Detection of substance P in the central nervous system by a monoclonal antibody. *Proc Natl Acad Sci U S A.* 1979 Jul;76(7):3532-6. PubMed PMID: 386341.