Datasheet: 7863-2004

Description:	MOUSE ANTI HUMAN PROTEIN GENE PRODUCT 9.5
Specificity:	PROTEIN GENE PRODUCT 9.5
Other names:	GENE PRODUCT 9.5, NEUROSCIENCE, PGP 9.5, UCHL1
Format:	Purified
Product Type:	Monoclonal Antibody
Clone:	13C4
Isotype:	IgG2a
Quantity:	0.2 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 - Paraffin (1)	▪			1/200
ELISA	▪			
Western Blotting	▪			1/100 - 1/1000
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) **Antigen is stable in formalin fixed paraffin embedded sections, however we recommend fixation in 95% ethanol/5% acetic acid for 2-3 hours prior to paraffin embedding. Can be used without acid/ethanol fixation if the sections are subjected to microwave treatment in citrate buffer by standard methods.**

Target Species	Human
Species Cross Reactivity	Reacts with: Rat, Guinea Pig, Pig **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 A
Buffer Solution	Phosphate buffered saline
Preservative Stabilisers	0.09% Sodium Azide (NaN_3)
Carrier Free	Yes

Approx. Protein Concentrations	1 mg/ml
Immunogen	Native, from brain
External Database Links	**UniProt:** P09936 Related reagents **Entrez Gene:** 7345 UCHL1 Related reagents
Specificity	**Mouse anti Human protein gene product 9.5 antibody, clone 13C4** recognizes protein gene product 9.5 (PGP9.5), a ubiquitin hydrolase which is widely expressed in neuronal tissues and represents 1-2% of total soluble brain proteins. PGP9.5, also known as ubiquitin C-terminal hydrolase 1 (UCHL-1), is involved in the regulation of the ubuiquitin pathway. This product stains neuronal cell bodies and axons in the CNS and periphery, small nerve fibres in peripheral tissues, neuroendocrine cells in the pituitary, thyroid, pancreas and tumours of the DNES. Also stains neuroendocrine cells in human adult gut (unlike 31A3). Clones 31A3 and 13C4 each recognise a different epitope towards the N-terminus of the protein.
References	1. Wilson, P.O. *et al.* (1988) The immunolocalization of protein gene product 9.5 using rabbit polyclonal and mouse monoclonal antibodies. Br. J. Exp. Pathol. 69: 91-104. 2. Kotani, T. *et al.* (2010) Expression of PTPRO in the interneurons of adult mouse olfactory bulb. J Comp Neurol. 518: 119-36. 3. Buels, K.S. *et al.* (2012) Non-bronchodilating mechanisms of tiotropium prevent airway hyperreactivity in a guinea-pig model of allergic asthma. Br J Pharmacol. 165: 1501-14. 4. Sasaki, H. *et al.* (2001) Expression of the protein gene product 9.5, PGP9.5, is correlated with T-status in non-small cell lung cancer. Jpn J Clin Oncol. 31: 532-5. 5. Burliński, P.J. (2012) Inflammation- and axotomy-induced changes in cocaine- and amphetamine-regulated transcript peptide-like immunoreactive (CART-LI) nervous structures in the porcine descending colon. Pol J Vet Sci. 15 (3): 517-24. 6. Bulc, M. *et al.* (2012) Immunohistochemical characterization of the porcine nodose ganglion. Acta Histochem. pii: S0065-1281(12)00142-0. 7. Dudek, A. *et al.* (2012) Immunohistochemical characterization of neurons in the vestibular ganglion (Scarpa's ganglion) of the pig. Pol J Vet Sci.15: 499-507. 8. Zalecki, M. (2015) The Influence of Antral Ulcers on Intramural Gastric Nerve Projections Supplying the Pyloric Sphincter in the Pig (*Sus scrofa domestica*)-Neuronal Tracing Studies. PLoS One. 10 (5): e0126958. 9. Akazawa, N. *et al.* (2014) Neuroendocrine carcinoma of the esophagus: clinicopathologic study of 10 cases and verification of the diagnostic utility of mASH1, NeuroD1, and PGP9.5 Esophagus. 11 (4): 245-257. 10. Cooke, H.J. *et al.* (1999) Activation of neuronal adenosine A1 receptors suppresses secretory reflexes in the guinea pig colon. Am J Physiol. 276 (2 Pt 1): G451-62. 11. Godlewski J & Pidsudko Z (2012) Characteristic of galaninergic components of the enteric nervous system in the cancer invasion of human large intestine. Ann Anat. 194 (4): 368-72. 12. Kaleczyc, J. *et al.* (2007) The distribution and chemical coding of intramural neurons supplying the porcine stomach - the study on normal pigs and on animals suffering from swine dysentery. Anat Histol Embryol. 36 (3): 186-93. 13. Komori, N. *et al.* (2003) Presence of beta-arrestin-1 immunoreactivity in the cutaneous nerve fibers of rat glabrous skin. Brain Res. 988 (1-2): 121-9.

14. Pidsudko, Z. *et al.* (2008) Distribution and chemical coding of intramural neurons in the porcine ileum during proliferative enteropathy. J Comp Pathol. 138 (1): 23-31.
15. Pidsudko, Z. (2013) Immunohistochemical characteristics and distribution of neurons in the intramural ganglia supplying the urinary bladder in the male pig. Pol J Vet Sci. 16 (4): 629-38.
16. Sienkiewicz, W. *et al.* (2000) Has active immunization against gonadotrophin-releasing hormone any effect on testis innervation in the pig? An immunohistochemical study. Anat Histol Embryol. 29 (4): 247-54.

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. Should this product contain a precipitate we recommend microcentrifugation before use.
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

Goat Anti Mouse IgG (STAR76...)	RPE
Goat Anti Mouse IgG IgA IgM (STAR87...)	Alk. Phos., HRP
Rabbit Anti Mouse IgG (STAR9...)	FITC
Goat Anti Mouse IgG (STAR77...)	HRP
Rabbit Anti Mouse IgG (STAR12...)	RPE
Goat Anti Mouse IgG (Fc) (STAR120...)	FITC, HRP
Rabbit Anti Mouse IgG (STAR8...)	DyLight®800
Goat Anti Mouse IgG (STAR70...)	FITC
Human Anti Mouse IgG2a (HCA037...)	FITC, HRP
Rabbit Anti Mouse IgG (STAR13...)	HRP
Goat Anti Mouse IgG (H/L) (STAR117...)	Alk. Phos., DyLight®488, DyLight®549, DyLight®649, DyLight®680, DyLight®800, FITC, HRP

Recommended Negative Controls

MOUSE IgG2a NEGATIVE CONTROL (MCA929)

North & South America Tel: +1 800 265 7376 Fax: +1 919 878 3751 Email: antibody_sales_us@bio-rad.com
Worldwide Tel: +44 (0)1865 852 700 Fax: +44 (0)1865 852 739 Email: antibody_sales_uk@bio-rad.com
Europe Tel: +49 (0) 89 8090 95 21 Fax: +49 (0) 89 8090 95 50 Email: antibody_sales_de@bio-rad.com

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