Datasheet: MCA1454G

Description:	MOUSE ANTI HUMAN AGGRECAN
Specificity:	AGGRECAN
Format:	Purified
Product Type:	Monoclonal Antibody
Clone:	7D4
Isotype:	IgG1
Quantity:	0.2 mg

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	▪			
Immunohistology - Paraffin	▪			
ELISA	▪			
Immunoprecipitation	▪			
Western Blotting	▪			

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.

Target Species

Human

Species Cross Reactivity

Reacts with: Bovine
Does not react with:Chicken, Fish, Rat
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.

Product Form

Purified IgG - liquid

Preparation

Purified IgG prepared by affinity chromatography on Protein A from tissue culture supernatant

Buffer Solution	Phosphate buffered saline
Preservative Stabilisers	0.09% sodium azide (NaN_3)
Carrier Free	Yes
Approx. Protein Concentrations	IgG concentration 1.0mg/ml
Immunogen	Purified human articular cartilage aggrecan
External Database Links	**UniProt:** P16112 Related reagents **Entrez Gene:** 176 ACAN Related reagents
Synonyms	AGC1, CSPG1, MSK16
RRID	AB_10961289
Fusion Partners	Spleen cells from immunised Balb/c mice were fused with cells of the mouse NS1 myeloma cell line.
Specificity	**Mouse anti Human Aggrecan antibody, clone 7D4** recognizes human aggrecan, a proteoglycan and member of the aggrecan/versican proteoglycan family, which forms a major component of the extracellular matrix (ECM) of both cartilage and the central nervous system (CNS). Using a panel of core protein-directed antibodies directed against human aggrecan, revealed the distribution of different aggrecan isoforms within the CNS, and sub-divided the isoforms into clusters 1-5 accordingly. highlighting a difference in the relative abundance of these isoforms when comparing brain and cartilage tissues (Virgintino *et al.* 2009). Mouse anti Human Aggrecan antibody, clone 7D4 recognizes epitopes within the N-terminal G1-IGD-G2 region of aggrecan, identified as a cluster 1 isoform.
Histology Positive Control Tissue	Human cerebral cortex
References	1. Betre, H. *et al.* (2002) A two-step chondrocyte recovery system based on thermally sensitive elastin-like polypeptide scaffolds for cartilage tissue engineering Engineering in Medicine and Biology 24th Annual Conference and the Annual Fall Meeting of the Biomedical Engineering Society EMBS/BMES Conference,: 829-30. 2. Virgintino, D. *et al.* (2009) Differential distribution of aggrecan isoforms in perineuronal nets of the human cerebral cortex. J Cell Mol Med. 13 (9B): 3151-73.

3. Shintani, N. and Hunziker, E.B. (2011) Differential effects of dexamethasone on the chondrogenesis of mesenchymal stromal cells: Influence of microenvironment, tissue origin and growth factor. Eur Cell Mater. 22: 302-20.
4. Blosa, M. *et al.* (2013) Unique features of extracellular matrix in the mouse medial nucleus of trapezoid body--implications for physiological functions. Neuroscience. 228: 215-34.
5. Shintani N *et al.* (2013) TGF-β1 enhances the BMP-2-induced chondrogenesis of bovine synovial explants and arrests downstream differentiation at an early stage of hypertrophy. PLoS One. 8 (1): e53086.
6. Suttkus, A. *et al.* (2014) Aggrecan, link protein and tenascin-R are essential components of the perineuronal net to protect neurons against iron-induced oxidative stress. Cell Death Dis. 5: e1119.
7. Gaál B *et al.* (2014) Distribution of extracellular matrix macromolecules in the vestibular nuclei and cerebellum of the frog, *Rana esculenta*. Neuroscience. 258: 162-73.
8. Wan, S. *et al.* (2016) Self-assembling peptide hydrogel for intervertebral disc tissue engineering. Acta Biomater. 46: 29-40.
9. Rogers, S.L. *et al.* (2018) Normal Development of the Perineuronal Net in Humans; In Patients with and without Epilepsy. Neuroscience. 384: 350-60.
10. Goldberg-Bockhorn, E. *et al.* (2018) Laser surface modification of decellularized extracellular cartilage matrix for cartilage tissue engineering. Lasers Med Sci. 33 (2): 375-84.
11. De Moor, L. *et al.* (2020) Scaffold Free Microtissue Formation for Enhanced Cartilage Repair. Ann Biomed Eng. 48 (1): 298-311.

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.
Guarantee	12 months from date of despatch
Health And Safety Information	Material Safety Datasheet documentation #10040 available at: https://www.bio-rad-antibodies.com/SDS/MCA1454G 10040
Regulatory	For research purposes only

Related Products

Recommended Secondary Antibodies

Goat Anti Mouse IgG (STAR77...)	HRP
Rabbit Anti Mouse IgG (STAR12...)	RPE
Goat Anti Mouse IgG IgA IgM (STAR87...)	Alk. Phos., HRP
Goat Anti Mouse IgG (STAR76...)	RPE
Goat Anti Mouse IgG (Fc) (STAR120...)	FITC, HRP

Rabbit Anti Mouse IgG (STAR13...)	HRP
Rabbit Anti Mouse IgG (STAR9...)	FITC
Goat Anti Mouse IgG (H/L) (STAR117...)	Alk. Phos., DyLight®488, DyLight®550, DyLight®650, DyLight®680, DyLight®800, FITC, HRP
Goat Anti Mouse IgG (STAR70...)	FITC

Recommended Negative Controls

MOUSE IgG1 NEGATIVE CONTROL (MCA928)

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

To find a batch/lot specific datasheet for this product, please use our online search tool at: bio-rad-antibodies.com/datasheets

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