

Datasheet: MCA1454G

BATCH NUMBER 160613

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 (NaN₃)

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 Cerebral Cortex

References

1. 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.](#)
2. 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.](#)
3. 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.](#)
 4. Suttikus, 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.](#)
 5. 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.](#)
 6. Shintani N *et al.* (2013) TGF- β 1 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.](#)
 7. 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.](#)
 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	<p>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.</p> <p>Avoid repeated freezing and thawing as this may denature the antibody. Storage in frost-free freezers is not recommended.</p>
Guarantee	12 months from date of despatch
Health And Safety Information	<p>Material Safety Datasheet documentation #10040 available at: https://www.bio-rad-antibodies.com/SDS/MCA1454G</p> <p>10040</p>
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 (STAR70...)	FITC

Goat Anti Mouse IgG IgA IgM (STAR87...) [Alk. Phos.](#), [HRP](#)
Goat Anti Mouse IgG (STAR76...) [RPE](#)
Goat Anti Mouse IgG (H/L) (STAR117...) [Alk. Phos.](#), [DyLight®488](#), [DyLight®550](#),
[DyLight®650](#), [DyLight®680](#), [DyLight®800](#),
[FITC](#), [HRP](#)
Rabbit Anti Mouse IgG (STAR13...) [HRP](#)
Goat Anti Mouse IgG (Fc) (STAR120...) [FITC](#), [HRP](#)
Rabbit Anti Mouse IgG (STAR9...) [FITC](#)

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

'M383450:210513'

Printed on 25 Mar 2023

© 2023 Bio-Rad Laboratories Inc | [Legal](#) | [Imprint](#)