

Datasheet: MCA1454G

BATCH NUMBER 151505

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|----------------------|---------------------------|
| 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).

Studies using a panel of core protein-directed antibodies against human aggrecan, revealed the distribution of different aggrecan isoforms within the CNS, and sub-divided the isoforms into clusters 1-5 accordingly. These studies also showed 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.](#)

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| 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. |
| 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 (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](#)

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To find a batch/lot specific datasheet for this product, please use our online search tool at: bio-rad-antibodies.com/datasheets
'M365337:200529'

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