# Datasheet: MCA1728

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| **Description:** | MOUSE ANTI HUMAN CD44v4 |
| **Specificity:** | CD44v4 |
| **Format:** | Purified |
| **Product Type:** | Monoclonal Antibody |
| **Clone:** | VFF-11 |
| **Isotype:** | IgG1 |
| **Quantity:** | 0.1 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 | ▪ | | | 1/50 |
| Immunohistology - Frozen | ▪ | | | 1/50 - 1/500 |
| Immunohistology - Paraffin (1) | ▪ | | | |
| 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.

(1)**This product requires antigen retrieval using heat treatment prior to staining of paraffin sections.Sodium citrate buffer pH 6.0 is recommended for this purpose.**

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| **Target Species** | Human |
| **Product Form** | Purified IgG - liquid |
| **Preparation** | Antibody purified from tissue culture supernatant |
| **Buffer Solution** | Phosphate buffered saline |
| **Preservative Stabilisers** | 0.01% Thiomersal |

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| **Approx. Protein Concentrations** | IgG concentration 0.5 mg/ml |
| **Immunogen** | Glutathione S Transferase (GST) fusion protein corresponding to the variable domains (v3 to v10) of human CD44. |
| **External Database Links** | **UniProt:**<br>P16070 Related reagents<br><br>**Entrez Gene:**<br>960 CD44 Related reagents |
| **Synonyms** | LHR, MDU2, MDU3, MIC4 |
| **RRID** | AB_322690 |
| **Fusion Partners** | Spleen cells from immunized BALB/c mice were fused with cells of the P3X63Ag8.653 myeloma cell line. |
| **Specificity** | **Mouse anti Human CD44v4 antibody, clone VFF-11** recognizes an epitope encoded by exon v4 on the variant portion of human CD44. CD44v4 is strongly expressed on some breast cancer cell lines, notably epithelial-like BT-20 cells where v4 containing isoforms possess functional E-selectin ligand activity mediating cell adhesion under physiological flow conditions (Shirure *et al.* 2014). |
| **Flow Cytometry** | Use 10µl of the suggested working dilution to label $10^6$ cells in 100µl |
| **References** | 1. Koopman, G. *et al.* (1993) Activated human lymphocytes and aggressive non-Hodgkin's lymphomas express a homologue of the rat metastasis-associated variant of CD44. J Exp Med. 177 (4): 897-904.<br>2. Hanley, W.D. *et al.* (2005) Variant isoforms of CD44 are P- and L-selectin ligands on colon carcinoma cells. FASEB J. 20: 337-9.<br>3. Rajarajan, A. *et al.* (2012) CD44 expression in oro-pharyngeal carcinoma tissues and cell lines. PLoS One. 7: e28776.<br>4. Chandrasekaran, S. *et al.* (2012) Effect of homotypic and heterotypic interaction in 3D on the E-selectin mediated adhesive properties of breast cancer cell lines Biomaterials. 33: 9037-48.<br>5. El-Sharkawy, M.M. *et al.* (2003) CD44 expression and soluble CD44 as a potential marker of tumor load in pediatric acute leukemia. J Egypt Nat Cancer Inst. 15: 129-35.<br>6. Shirure, V.S. *et al.* (2015) CD44 variant isoforms expressed by breast cancer cells are functional E-selectin ligands under flow conditions. Am J Physiol Cell Physiol. 308 (1): C68-78.<br>7. Hudson, D.L. *et al.* (1995) CD44 is the major peanut lectin-binding glycoprotein of human epidermal keratinocytes and plays a role in intercellular adhesion. J Cell Sci. 108: 1959-70.<br>8. De Sousa, P. A. (2009) Method for differentiation of stem cells. U.S. Patent Application: US20090123430 A1 |

9. Lallana, E. *et al.* (2017) Chitosan/Hyaluronic Acid Nanoparticles: Rational Design Revisited for RNA Delivery. Mol Pharm. 14 (7): 2422-36.
10. Spadea, A. *et al.* (2019) Evaluating the Efficiency of Hyaluronic Acid for Tumor Targeting via CD44. Mol Pharm. 16 (6): 2481-93.
11. Noori, M.S. *et al.* (2018) An adhesion based approach for the detection of esophageal cancer. Integr Biol (Camb). 10 (12): 747-57.

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| **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.<br><br>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 #10094 available at: https://www.bio-rad-antibodies.com/SDS/MCA1728<br>10094 |
| **Regulatory** | For research purposes only |

## Related Products

### Recommended Secondary Antibodies

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| 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 |

### 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
'M416558:230302'

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