

# Anti-CD44 Picoband Antibody

Catalog # ABO10013

## Product Information

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| <b>Application</b>       | WB, IHC-P, E                                                                                               |
| <b>Primary Accession</b> | <a href="#">P16070</a>                                                                                     |
| <b>Host</b>              | Rabbit                                                                                                     |
| <b>Reactivity</b>        | Human, Mouse, Rat                                                                                          |
| <b>Clonality</b>         | Polyclonal                                                                                                 |
| <b>Format</b>            | Lyophilized                                                                                                |
| <b>Description</b>       | Rabbit IgG polyclonal antibody for CD44 detection. Tested with WB, IHC-P, Direct ELISA in Human;Mouse;Rat. |

**Reconstitution** Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

## Additional Information

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| <b>Gene ID</b>                  | 960                                                                                                                                                                                                                                                                                                    |
| <b>Other Names</b>              | CD44 antigen, CDw44, Epican, Extracellular matrix receptor III, ECMR-III, GP90 lymphocyte homing/adhesion receptor, HUTCH-I, Heparan sulfate proteoglycan, Hermes antigen, Hyaluronate receptor, Phagocytic glycoprotein 1, PGP-1, Phagocytic glycoprotein I, PGP-I, CD44, CD44, LHR, MDU2, MDU3, MIC4 |
| <b>Calculated MW</b>            | 81538                                                                                                                                                                                                                                                                                                  |
| <b>Application Details</b>      | Western blot, 0.1-0.5 $\mu$ g/ml<br>Immunohistochemistry(Paraffin-embedded Section), 0.5-1 $\mu$ g/ml<br>Direct ELISA, 0.1-0.5 $\mu$ g/ml                                                                                                                                                              |
| <b>Subcellular Localization</b> | Cell membrane.                                                                                                                                                                                                                                                                                         |
| <b>Tissue Specificity</b>       | Isoform 10 (epithelial isoform) is expressed by cells of epithelium and highly expressed by carcinomas. Expression is repressed in neuroblastoma cells.                                                                                                                                                |
| <b>Source</b>                   | Eukaryota                                                                                                                                                                                                                                                                                              |
| <b>Contents</b>                 | Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na <sub>2</sub> HPO <sub>4</sub> , 0.05mg NaN <sub>3</sub> .                                                                                                                                                                                       |
| <b>Immunogen</b>                | E. coli-derived human CD44 recombinant protein (Position: Q21-H259).                                                                                                                                                                                                                                   |
| <b>Cross Reactivity</b>         | No cross reactivity with other proteins.                                                                                                                                                                                                                                                               |
| <b>Storage</b>                  | At -20° C; for one year. After r° Constitution, at 4° C; for one month. It° Can also be aliquotted and stored frozen at -20° C; for a longer time. Avoid repeated freezing and thawing.                                                                                                                |

## Protein Information

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| <b>Name</b>              | CD44                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Synonyms</b>          | LHR, MDU2, MDU3, MIC4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Function</b>          | Cell-surface receptor that plays a role in cell-cell interactions, cell adhesion and migration, helping them to sense and respond to changes in the tissue microenvironment (PubMed: <a href="#">16541107</a> , PubMed: <a href="#">19703720</a> , PubMed: <a href="#">22726066</a> ). Participates thereby in a wide variety of cellular functions including the activation, recirculation and homing of T-lymphocytes, hematopoiesis, inflammation and response to bacterial infection (PubMed: <a href="#">7528188</a> ). Engages, through its ectodomain, extracellular matrix components such as hyaluronan/HA, collagen, growth factors, cytokines or proteases and serves as a platform for signal transduction by assembling, via its cytoplasmic domain, protein complexes containing receptor kinases and membrane proteases (PubMed: <a href="#">18757307</a> , PubMed: <a href="#">23589287</a> ). Such effectors include PKN2, the RhoGTPases RAC1 and RHOA, Rho-kinases and phospholipase C that coordinate signaling pathways promoting calcium mobilization and actin-mediated cytoskeleton reorganization essential for cell migration and adhesion (PubMed: <a href="#">15123640</a> ). Upon interaction with LGALS9 ligand, activates downstream signaling components including LCK, ERK and MAPK to promotes NK cell activation (PubMed: <a href="#">37006235</a> ). |
| <b>Cellular Location</b> | Cell membrane; Single-pass type I membrane protein. Cell projection, microvillus {ECO:0000250 UniProtKB:P15379}. Secreted Note=Colocalizes with actin in membrane protrusions at wounding edges Co-localizes with RDX, EZR and MSN in microvilli. Localizes to cholesterol-rich membrane-bound lipid raft domains {ECO:0000250 UniProtKB:P15379, ECO:0000269 PubMed:23589287}                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Tissue Location</b>   | Detected in fibroblasts and urine (at protein level) (PubMed:25326458, PubMed:36213313, PubMed:37453717). Detected in placenta (at protein level) (PubMed:32337544). Isoform 10 (epithelial isoform) is expressed by cells of epithelium and highly expressed by carcinomas. Expression is repressed in neuroblastoma cells                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

## Background

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CD44 is also known as LHR or MC56. The protein encoded by this gene is a cell-surface glycoprotein involved in cell-cell interactions, cell adhesion and migration. It is a receptor for hyaluronic acid (HA) and can also interact with other ligands, such as osteopontin, collagens, and matrix metalloproteinases (MMPs). This protein participates in a wide variety of cellular functions including lymphocyte activation, recirculation and homing, hematopoiesis, and tumor metastasis. Transcripts for this gene undergo complex alternative splicing that results in many functionally distinct isoforms, however, the full length nature of some of these variants has not been determined. Alternative splicing is the basis for the structural and functional diversity of this protein, and may be related to tumor metastasis.

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