

# Rabbit Monoclonal Antibody to Human Secreted Phosphoprotein 1

**Cat. No.** CAB11606RH    **Lot. No.** (See product label)

## SPECIFICATION

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| <b>Product Overview</b>    | Rabbit Monoclonal Antibody to Human Secreted Phosphoprotein 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Species</b>             | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Source</b>              | Rabbit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Antigen Description</b> | <p>Osteopontin, also known as Secreted phosphoprotein 1, Bone sialoprotein 1, BSP-1, OPN, and SPP1, is a member of the osteopontin family and a SIBLING glycoprotein that was first identified in 1986 in osteoblasts. It is an extracellular structural protein and therefore an organic component of bone. Osteopontin is expressed in bone, although it is also expressed in other tissues. Osteopontin acts as a cytokine which is involved in enhancing production of interferon-gamma and interleukin-12 and reducing production of interleukin-10. It is essential in the pathway that leads to type I immunity. Osteopontin has been implicated as an important factor in bone remodeling. Specifically, research suggests it plays a role in anchoring osteoclasts to the mineral matrix of bones. The fact that Osteopontin interacts with multiple cell surface receptors which are ubiquitously expressed makes it an active player in many physiological and pathological processes including wound healing, bone turnover, tumorigenesis, inflammation and ischemia. Therefore, manipulation of plasma Osteopontin levels may be useful in the treatment of autoimmune diseases, cancer metastasis, osteoporosis and some forms of stress.</p> |
| <b>Specificity</b>         | Human Osteopontin / SPP1 / ETA-1. No cross-reactivity with human cell lysate ( 293                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

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|---------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                     | cell line ) in WB and ELISA.                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Immunogen</b>    | Recombinant Human Osteopontin / SPP1 / ETA-1 Protein                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Isotype</b>      | Rabbit IgG                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Clone</b>        | A015                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Applications</b> | Western blot; ELISA                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Dilution</b>     | Western blot: This antibody can be used at 1-2 µg/mL with the appropriate secondary reagents to detect Human SPP1 in WB. Using a DAB detection system, the detection limit for Human SPP1 is approximately 0.5 ng/lane under non-reducing conditions and reducing conditions. Direct ELISA: This antibody can be used at 0.1-0.2 µg/mL with the appropriate secondary reagents to detect Human SPP1. The detection limit for Human SPP1 is approximately 0.00245 ng/well. |
| <b>Preparation</b>  | This antibody was obtained from a rabbit immunized with purified, human cell-derived, recombinant Human Osteopontin / SPP1 / ETA-1                                                                                                                                                                                                                                                                                                                                        |
| <b>Format</b>       | 0.2 µm filtered solution in PBS with 5% trehalose                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Storage</b>      | This antibody can be stored at 2-8°C for one month without detectable loss of activity. Antibody products are stable for twelve months from date of receipt when stored at -20 to -70 °C. Preservative-Free. Sodium azide is recommended to avoid contamination (final concentration 0.05%-0.1%). It is toxic to cells and should be disposed of properly. Avoid repeated freeze-thaw cycles.                                                                             |

## GENE INFORMATION

**Gene Name** SPP1 secreted phosphoprotein 1 [ Homo sapiens ]

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| <b>Official Symbol</b>     | SPP1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Synonyms</b>            | SPP1; secreted phosphoprotein 1; BNSP, bone sialoprotein I, OPN, osteopontin; osteopontin; BSPI; early T lymphocyte activation 1; ETA 1; uropontin; nephropontin; osteopontin-C; osteopontin-D; SPP1/CALPHA1 fusion; bone sialoprotein 1; urinary stone protein; early T-lymphocyte activation 1; osteopontin/immunoglobulin alpha 1 heavy chain constant region fusion protein; secreted phosphoprotein 1 (osteopontin, bone sialoprotein I, early T-lymphocyte activation 1); OPN; BNSP; ETA-1; MGC110940; |
| <b>Gene ID</b>             | 6696                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>mRNA Refseq</b>         | NM_000582                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Protein Refseq</b>      | NP_000573                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>MIM</b>                 | 166490                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>UniProt ID</b>          | P10451                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Chromosome Location</b> | 4q22.1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Pathway</b>             | Direct p53 effectors, organism-specific biosystem; ECM-receptor interaction, organism-specific biosystem; ECM-receptor interaction, conserved biosystem; Endochondral Ossification, organism-specific biosystem; FGF signaling pathway, organism-specific biosystem; Focal Adhesion, organism-specific biosystem; Focal adhesion, organism-specific biosystem;                                                                                                                                               |
| <b>Function</b>            | cytokine activity; extracellular matrix binding;                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

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