

## Product Information

### Monoclonal Anti-MAGE-1

#### Clone MA454

produced in mouse, purified immunoglobulin

Catalog Number **M6320**

#### Product Description

Monoclonal Anti-MAGE-1 (mouse IgG1 isotype) is derived from the hybridoma MA454 produced by the fusion of mouse myeloma cells (SP2/0 cells) and splenocytes from mice immunized with human recombinant MAGE-1 (Gene ID: 4100).<sup>1</sup> The isotype is determined using a double diffusion immunoassay using Mouse Monoclonal Antibody Isotyping Reagents, Catalog Number ISO2.

Monoclonal Anti-MAGE-1 recognizes human MAGE-1. The antibody does not recognize MAGE-2 and MAGE-3.<sup>1,2</sup> The product is useful in ELISA,<sup>1</sup> immunoblotting (~46 kDa),<sup>1</sup> and immunohistochemistry.<sup>2,3,6,7</sup>

Cytolytic T lymphocytes (CTLs) from melanoma tumor-bearing patients recognize, *in vitro*, tumor specific antigens. The first melanoma-associated antigen (MAGE) to be identified was MAGE-A1. It was identified due to its cell surface expression as a tumor-specific peptide bound to major histocompatibility complexes (MHC) and its reactivity of autolytic T cells.<sup>4</sup> The MAGE family of proteins contains over 25 MAGE genes that have now been identified in human. These proteins share a homologous region, named the MAGE homology domain (MHD).<sup>1,5</sup> Based on their sequence homology there are three acidic MAGEs termed A, B, and C, and one basic subgroup, MAGE-D, which includes Necdin, Restin, and others. MAGE proteins were further classified as belonging to either subgroup I or II based on their expression patterns. MAGE-A, -B, and -C that belong to subgroup I, are expressed in malignant tumors and testis, but not in other normal tissues. Subgroup II MAGEs are expressed in various normal adult human tissues. Expression of MAGE-1 in neoplastic cells depends on the binding of the transcription factor Ets to non-methylated cis regulatory sequences, located in its promoter. Expression of MAGE-1 was induced in non MAGE-A1 expressing tumor cells once treated with demethylating reagent, 5-aza-2-(5DC).<sup>1,5</sup>

#### Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide as a preservative.

Antibody concentration: ~2 mg/mL

#### Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

#### Storage/Stability

For continuous use, store at 2-8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing, or storage in "frost-free" freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

#### Product Profile

Immunoblotting: a working concentration of 5-10 µg/mL is recommended using total cell extract of SKML37 cells.

**Note:** In order to obtain the best results using various techniques and preparations, we recommend determining optimal working dilutions by titration.

#### References

1. Chen, Y.T., *Proc. Natl. Acad. Sci. USA*, **91**, 1004-1008 (1994).
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5. Xiao, J., and Chen, H.S., *World J. Gastro.*, **10**, 1849-1853 (2004).

6. Luftl, M., et al., *Brit. J. Dermatol.*, **151**, 1213-1218 (2004).
7. Gjerstorff, M.F., et al., *Brit. J. Cancer*, **94**, 1864-1873 (2006).

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