Human MAGEA3 Antibody

Monoclonal Mouse IgG_1 Clone # 1124642

Catalog Number: MAB11839

DESCRIPTION

Species Reactivity	Human
Specificity	Detects recombinant human MAGE-A3 protein in Direct ELISA.
Source	Monoclonal Mouse IgG_1 Clone # 1124642
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	*E. coli*-derived recombinant human MAGE-A3 pro2-Glu314 Accesssion # P43357
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose.

APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Western Blot	2 µg/mL	HT1080 human fibrosarcoma cell line
Immunohistochemistry	0.25-25 µg/mL	Immersion fixed paraffin-embedded sections of human lung tumor and melanoma

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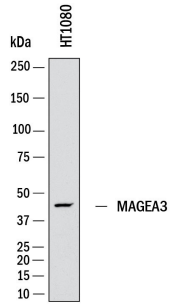
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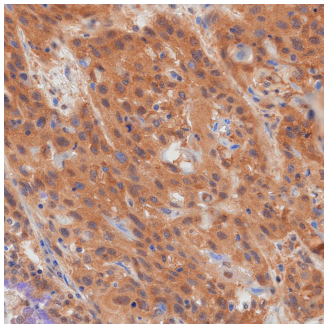
DATA

Western Blot



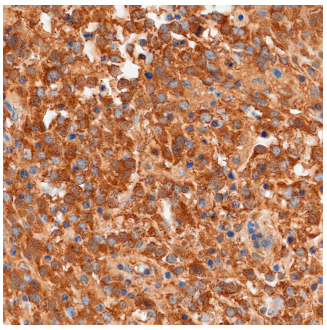
Detection of Human MAGEA3 by Western Blot. Western Blot shows lysates of HT1080 human fibrosarcoma cell line. PVDF membrane was probed with 2 µg/ml of Mouse Anti-Human MAGEA3 Monoclonal Antibody (Catalog # MAB11839) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF018). A specific band was detected for MAGEA3 at approximately 45 kDa (as indicated). This experiment was conducted under reducing conditions and using Western Blot Buffer Group 1.

Immunohistochemistry-Paraffin



Immersion fixed paraffin-embedded sections of human lung tumor MAGEA3 was detected in immersion fixed paraffin-embedded sections of human lung tumor using Mouse Anti-Human MAGEA3 Monoclonal Antibody (Catalog # MAB11839) at 5 µg/ml overnight at 4 °C. Before incubation with the primary antibody, tissue was subjected to heat-induced epitope retrieval using VisUCyte Antigen Retrieval Reagent-Basic (Catalog # VCTS021). Tissue was stained using the HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF007) and counterstained with hematoxylin (blue). Specific staining was localized to the cytoplasm and nucleus. View our protocol for Chromogenic IHC Staining of Paraffin-embedded Tissue Sections.

Immunohistochemistry-Paraffin



Immersion fixed paraffin-embedded sections of human melanoma MAGEA3 was detected in immersion fixed paraffin-embedded sections of human melanoma using Mouse Anti-Human MAGEA3 Monoclonal Antibody (Catalog # MAB11839) at 5 µg/ml overnight at 4 °C. Before incubation with the primary antibody, tissue was subjected to heat-induced epitope retrieval using VisUCyte Antigen Retrieval Reagent-Basic (Catalog # VCTS021). Tissue was stained using the HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF007) and counterstained with hematoxylin (blue). Specific staining was localized to the cytoplasm and nucleus. View our protocol for Chromogenic IHC Staining of Paraffin-embedded Tissue Sections.

PREPARATION AND STORAGE

Reconstitution	Reconstitute lyophilized material at 0.2 mg/ml in sterile PBS. For liquid material, refer to CoA for concentration.
Shipping	Lyophilized product is shipped at ambient temperature. Liquid small pack size (-SP) is shipped with polar packs. Upon receipt, store immediately at the temperature recommended below.
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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BACKGROUND

Melanoma-associated antigen-A3 (MAGE-A3) is a member of the MAGE (Melanoma Antigen Gene) protein family, with a molecular weight of approximately 43 kDa. The MAGE protein family is characterized by conserved domains and plays critical roles in cellular processes such as transcription regulation, apoptosis, and adaptation to cellular stress. MAGE-A3 is typically expressed in various malignancies, including melanoma and lung cancer, while exhibiting limited expression in normal tissues, primarily restricted to the testis. Due to its tumor-specific expression and immunogenic properties, MAGE-A3 has garnered significant interest as a target for cancer immunotherapy. Aberrant regulation of MAGE-A3 is associated with cancer progression, contributing to immune evasion and promoting tumor cell growth and survival. Recent studies have highlighted the role of MAGE-A3 in interacting with the ubiquitin-proteasome system, implicating it in protein degradation pathways that influence oncogenic signaling. These attributes underscore the importance of MAGE-A3 as a biomarker for both diagnostic and therapeutic applications in oncology.

References:

1. Chomez, P., De Backer, O., Bertrand, M., De Plaen, E., Boon, T., & Lucas, S. (2001). An overview of the MAGE gene family with the identification of all human members of the family. Cancer Research, 61(14), 5544-5551.
2. Lucas, S., Brasseur, F., Demoulin, B., & Boon, T. (1997). Identification of a new MAGE gene family. Experimental Cell Research, 232(2), 418-424. doi: 10.1006/excr.1997.3561Jiricny J. The multifaceted mismatch-repair system. Nat Rev Mol Cell Biol. 2006 May;7(5):335-46. doi: 10.1038/nrm1907. PMID: 16612326.
3. Van den Eynde, B. J., van der Bruggen, P. (1997). T cell defined tumor antigens. Current Opinion in Immunology, 9(5), 684-693.

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