Human VPS35 Antibody

Monoclonal Mouse IgG_{2A} Clone # 1114723

Catalog Number: MAB11770

DESCRIPTION

Species Reactivity	Human
Specificity	Detects a synthetic peptide specific for human VPS35 around amino acid 790 in Direct ELISA.
Source	Monoclonal Mouse IgG_{2A} Clone # 1114723
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Synthetic Peptide Accession # Q96QK1
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose.

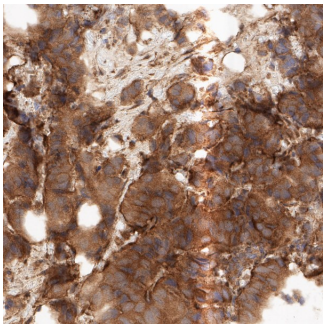
APPLICATIONS

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
Immunohistochemistry	1-25 µg/mL	Immersion fixed paraffin-embedded sections of human breast tumor

DATA

Immunohistochemistry



Detection of VSP35 in human breast tumor VSP35 was detected in immersion fixed paraffin-embedded sections of human breast tumor using Mouse Anti-Human VSP35 Monoclonal Antibody (Catalog # MAB11770) 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 membrane in breast tumor. 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

VPS35 (vacuolar protein sorting-associated protein 35) is a critical component of the retromer complex, which plays an essential role in intracellular trafficking and protein recycling. With a molecular weight of approximately 90 kDa, VPS35 is responsible for mediating the retrieval of proteins and receptors from endosomes to their target destinations, including the trans-Golgi network and the plasma membrane. This process is crucial for maintaining cellular homeostasis, membrane integrity, and signaling pathways. VPS35 is ubiquitously expressed in various tissues and is fundamental for normal cellular function, particularly neuronal health. Dysregulation or mutation of VPS35 has been strongly linked to neurodegenerative diseases, such as Parkinson's disease, due to its role in recycling transmembrane proteins that regulate synaptic and neuronal stability. Furthermore, emerging evidence suggests VPS35 involvement in cellular mechanisms related to autophagy, mitochondrial function, and inflammation. VPS35 appears to play a role in maintaining lysosome and mitochondria integrity, processes that are often disrupted in cancer cells to support their metabolic and invasive properties. Emerging evidence suggests that VPS35 dysregulation could also contribute to chemo-resistance in malignancies, including breast cancer. Because of its role in endosomal trafficking, neuronal health, and cancer biology, VPS35 represents a promising biomarker and therapeutic target for neurodegenerative disorders and oncological diseases.

References:

1. Burd, C. *et al.* (2014) Cold Sprin Harb Perspect Biol. **6(2)**:a016774.
2. Fan, X. *et al.* (2025) J. Inflamm. Res. **18**:4665-4680.
3. Li, X. *et al.* (2021) Cancer Cell Int. **21(1)**:265.

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