

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human VSTM5 in direct ELISAs.
Source	Recombinant Monoclonal Rabbit IgG Clone # 2696A
Purification	Protein A or G purified from cell culture supernatant
Immunogen	Human embryonic kidney cell HEK293-derived human VSTM5 Met1-His147 Accession # NP_001138343
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

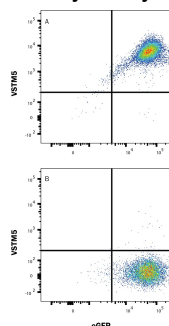
APPLICATIONS

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
Flow Cytometry	0.25 µg/10 ⁶ cells	HEK293 Human Cell Line Transfected with Human VSTM5 and eGFP
Immunohistochemistry	3-25 µg/mL	Immersion fixed paraffin-embedded sections of human brain (hypothalamus)

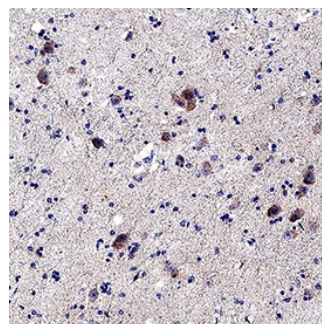
DATA

Flow Cytometry



Detection of VSTM5 in HEK293 Human Cell Line Transfected with Human VSTM5 and eGFP by Flow Cytometry HEK293 human embryonic kidney cell line transfected with (A) human VSTM5 or (B) irrelevant protein, and eGFP was stained with Rabbit Anti-Human VSTM5 Monoclonal Antibody (Catalog # MAB10872) followed by Allophycocyanin-conjugated Anti-Rabbit IgG Secondary Antibody (Catalog # F0111). Quadrant markers were set based on Rabbit IgG Control Antibody (Catalog # MAB1050). Staining was performed using our Staining Membrane-associated Proteins protocol.

Immunohistochemistry



VSTM5 in Human Brain. VSTM5 was detected in immersion fixed paraffin-embedded sections of human brain (hypothalamus) using Rabbit Anti-Human/Mouse VSTM5 Monoclonal Antibody (Catalog # MAB10872) at 3 µg/mL for 1 hour at room temperature followed by incubation with the Anti-Rabbit IgG VisUCyte™ HRP Polymer Antibody (Catalog # VC003). Before incubation with the primary antibody, tissue was subjected to heat-induced epitope retrieval using Antigen Retrieval Reagent-Basic (Catalog # CTS013). Tissue was stained using DAB (brown) and counterstained with hematoxylin (blue). Specific staining was localized to neuronal cell bodies. Staining was performed using our protocol for IHC Staining with VisUCyte HRP Polymer Detection Reagents.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> • 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.

BACKGROUND

V-set and transmembrane domain-containing protein 5 (VSTM5) is a cell-adhesion like molecule that belongs to the Ig superfamily. This molecule is expressed in hippocampal neurons. It regulates neuronal morphology by promoting dendritic protrusions that develop into dendritic spines. VSTM5 is a novel factor involved in the modulation of the neuronal membrane and a critical element in normal neuronal circuit formation. It is one of the target genes responsible for variations in patient responses to treatments for major depressive disorder. Overexpression of VSTM5 in utero delays neuronal migration and induces multiple branches in leading processes during corticogenesis. Glycosylation at individual N-linked glycosylation sites (Asn43, Asn87, Asn101, and Asn108) not only play essential roles in surface expression of VSTM5 but also in the formation of neuronal dendritic filopodia.