Human VSTM2A Antibody

Monoclonal Mouse IgG_{2B} Clone # 1024735

Catalog Number: MAB100371

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human VSTM2A in direct ELISAs.
Source	Monoclonal Mouse IgG_{2B} Clone # 1024735
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Human embryonic kidney cell HEK293-derived human VSTM2A protein Ser25-Phe244 Accession # Q8TAG5-2
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.

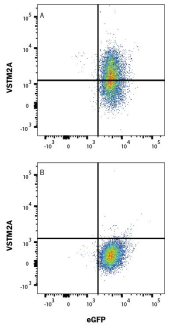
APPLICATIONS

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 VSTM2A and eGFP
CyTOF-ready	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	
ELISA	This antibody functions as an ELISA detection antibody when paired with Mouse Anti-Human VSTM2A Monoclonal Antibody (Catalog # MAB10037). This product is intended for assay development on various assay platforms requiring antibody pairs.	

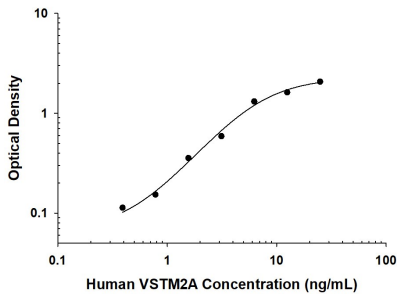
DATA

Flow Cytometry



Detection of VSTM2A in HEK293 Human Cell Line transfected with Human VSTM2A and eGFP by Flow Cytometry HEK293 human embryonic kidney cell line transfected with either (A) human VSTM2A or (B) irrelevant protein, and eGFP, was stained with Mouse anti-human VSTM2A monoclonal antibody (Catalog # MAB100371) followed by Allophycocyanin-conjugated anti-Mouse IgG Secondary Antibody (Catalog # F0101B). Quadrant markers were set based on control antibody staining (Catalog # MAB10041, data not shown). Staining was performed using our Staining Membrane-Associated Proteins protocol.

ELISA



Human VSTM2A ELISA Standard Curve. Recombinant Human VSTM2A protein was serially diluted 2-fold and captured by Mouse Anti-Human VSTM2A Monoclonal Antibody (Catalog # MAB10037) coated on a Clear Polystyrene Microplate (Catalog # DY990). Mouse Anti-Human VSTM2A Monoclonal Antibody (Catalog # Catalog # MAB100371) was biotinylated and incubated with the protein captured on the plate. Detection of the standard curve was achieved by incubating Streptavidin-HRP (Catalog # DY998) followed by Substrate Solution (Catalog # DY999) and stopping the enzymatic reaction with Stop Solution (Catalog # DY994).

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.** • 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

V-set and transmembrane domain-containing protein 2A (VSTM2A) is a secreted glycoprotein that is expressed by committed preadipocytes. N-linked glycosylation is crucial for its secretion, but not for preadipocyte cell differentiation activity. It is expressed during adipocyte development and its over-expression promotes adipogenesis (1). VSTM2A is highly expressed in the brain and *Vstm2a* was identified as an enigmatic gene that is highly produced in mouse brain (1, 2). A positive association has been observed between *Vstm2a* and *Pparg2*. VSTM2A plays a role in the regulation of the early stage of white and brown preadipocyte cell differentiation. It promotes adipogenic commitment of preadipocytes by increasing gene expression of the transcription factor PPARG in a BMP4-dependent signaling pathway (1, 3). In humans, two isoforms (1 and 2) exist due to alternative splicing. Human VSTM2A is synthesized either as a 236 amino acid (aa) (Isoform 1) or a 244 aa (Isoform 2) precursor that contains a 24 aa signal sequence followed by the VSTM2A domain. Human Isoform 2 VSTM2A shares 78% aa sequence identity with mouse and rat VSTM2A.

References:

1. Secco, B. *et al*. (2017) Cell Rep. **18**:93.
2. Pandey, A.K. *et al*. (2014) PloS One. **9**:e88889.
3. Berry, D.C. *et al*. (2013) Development. **140**:3939.

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