

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
Conjugate	Alexa Fluor 488 Excitation Wavelength: 488 nm Emission Wavelength: 515-545 nm
Formulation	Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

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	0.25-1 µg/10 ⁶ cells	HEK293 Human Cell Line transfected with Human VSTM2A and eGFP

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. <ul style="list-style-type: none"> 12 months from date of receipt, 2 to 8 °C as supplied.

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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