

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human VSTM4 in direct ELISAs.
Source	Monoclonal Rabbit IgG Clone # 2694B
Purification	Protein A or G purified from cell culture supernatant
Immunogen	Chinese Hamster Ovary cell line CHO-derived human VSTM4 Leu24-Tyr180 Accession # Q8IW00-1
Conjugate	Alexa Fluor 647 Excitation Wavelength: 650 nm Emission Wavelength: 668 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% 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.

Immunohistochemistry Optimal dilution of this antibody should be experimentally determined.

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. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

V-set and transmembrane domain-containing protein 4 (VSTM4) is a single-pass type I membrane protein in the immunoglobulin superfamily. Human VSTM4 is synthesized as a 320 amino acid (aa) precursor that contains a 23 aa signal sequence, 157 aa extracellular region, 21 aa TM domain, and 119 aa cytoplasmic tail. In humans, part of the extracellular region is cleaved into a 50 aa secreted peptide (aa 55-104) compared to mouse, which is cleaved into a 49 aa peptide (aa 55-103) (1). Because of its role in enhancing L-type voltage-gated calcium channel (L-VGCC) currents in photoreceptors, this peptide was named peptide Lv (1). Peptide Lv is expressed in the central nervous system and a variety of organs including spleen, intestine, retina, and lung (1, 2). The peptide may have possible roles in regulating the cardiovascular system and L-VGCC dependent neural plasticity (1, 2). Human VSTM4 gene is located on chromosome 10, which may be linked to late-onset Alzheimer's disease (3). Down-regulation of VSTM4 increased tamoxifen sensitivity and suppressed growth in cultured breast cancer cells (4). Within the ECD, human VSTM4 shares 87% and 85% aa sequence identity with mouse and rat VSTM4, respectively. The biological functions of VSTM4 remain unknown. Our in-house data show that VSTM4 inhibits the human T cell activation, including anti-CD3 induced IL-2 and IFN-γ secretion, and T cell proliferation.

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