Human TMEM119 Antibody

Recombinant Monoclonal Rabbit IgG Clone # 2699A
Catalog Number: MAB103131

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human TREM119 in direct ELISAs.
Source	Recombinant Monoclonal Rabbit IgG Clone # 2699A
Purification	Protein A or G purified from cell culture supernatant
Immunogen	Chinese Hamster Ovary cell line CHO derived human TREM119 Arg26-Met96 Accession # Q4V9L6.1
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.

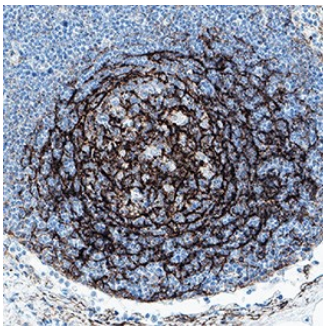
APPLICATIONS

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 TMEM119 and eGFP
Immunohistochemistry	1-25 µg/mL	Immersion fixed paraffin-embedded sections of human lymph node

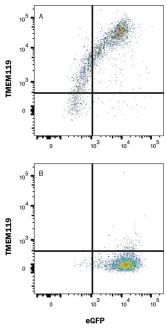
DATA

Immunohistochemistry



TMEM119 in Human lymph node. TMEM119 was detected in immersion fixed paraffin-embedded sections of human lymph node using Rabbit Anti-Human TMEM119 Monoclonal Antibody (Catalog # MAB103131) at 1 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 cell membrane and cytoplasm in lymphocytes. Staining was performed using our protocol for IHC Staining with VisUCyte HRP Polymer Detection Reagents.

Flow Cytometry



Detection of TMEM119 in HEK293 Human Cell Line Transfected with Human TMEM119 and eGFP by Flow Cytometry HEK293 human embryonic kidney cell line transfected with (A) human TMEM119 or (B) irrelevant protein, and eGFP was stained with Rabbit Anti-Human TMEM119 Monoclonal Antibody (Catalog # MAB103131) followed by Allophycocyanin-conjugated Anti-Rabbit IgG Secondary Antibody (Catalog # F0111). Quadrant markers were set based on Rabbit IgG Isotype Control (Catalog # MAB1050, data not shown). Staining was performed using our Staining Membrane-associated Proteins protocol.

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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Global bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL +1 612 379 2956
USA TEL 800 343 7475 Canada TEL 855 668 8722 China TEL +86 (21) 52380373
Europe | Middle East | Africa TEL +44 (0)1235 529449

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BACKGROUND

TMEM119 (Transmembrane Protein 119, also known as Osteoblast Induction Factor or OBIF), is an approximately 38-kDa type 1 transmembrane protein that is predominantly expressed in osteoblasts and is upregulated during osteoblastic differentiation (1, 2). TMEM119 is also expressed in a cell line of microglia, and TMEM119 immunoreactivity is observed in a specific subset of microglia in brains of neurodegenerative diseases, such as Alzheimer's disease (3). Mature human TMEM119 consists of a 71 amino acid (aa) extracellular domain (ECD), a 21 aa transmembrane segment, and a 166 aa cytoplasmic domain. Within the ECD, human TMEM119 shares 78% and 75% aa sequence identity with mouse and rat TMEM119, respectively. TMEM-119 is involved in the osteoblast differentiation and bone development by acting as a ligand and has been reported to contribute to the proliferation, migration, and invasion of osteosarcoma cells, as well as functioning as an oncogene in osteosarcoma (3, 4).

References:

1. Jiang, Z,H. *et al.* (2017) Expt & Mol Med. **49**:e329.
2. Mizuhashi, K. *et al.* (2012) Dev. Growth Differ. **54**:474.
3. Satoh, J. *et al.* (2016) Neuropathol. **36**:39.
4. Kanamoto, T. *et al.* (2009) BMC Develop. Biol. **9**:70.

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