Human TMEM119 Antibody

Monoclonal Mouse IgG_1 Clone # 1023426

Catalog Number: MAB10313

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human TREM119 in direct ELISAs.
Source	Monoclonal Mouse IgG_1 Clone # 1023426
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.

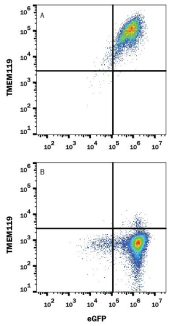
APPLICATIONS

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	5-25 µg/mL	Immersion fixed paraffin-embedded sections of human brain cortex tissue
CyTOF-ready	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	

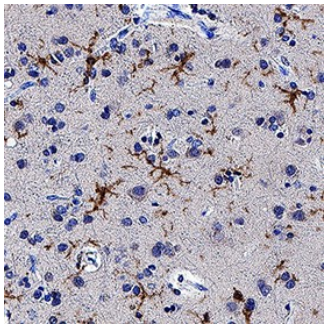
DATA

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 either (A) human TMEM119 or (B) irrelevant protein, and eGFP, was stained with Mouse anti-human TMEM119 monoclonal antibody (Catalog # MAB10313) followed by Allophycocyanin-conjugated anti-Mouse IgG Secondary Antibody (Catalog # F0101B). Quadrant markers were set based on control antibody staining (Catalog # MAB002, data not shown). Staining was performed using our Staining Membrane-Associated Proteins protocol.

Immunohistochemistry



TMEM119 in Human Brain Cortex Tissue. TMEM119 was detected in immersion fixed paraffin-embedded sections of human brain cortex tissue using Mouse Anti-Human TMEM119 Monoclonal Antibody (Catalog # MAB10313) at 5 µg/mL for 1 hour at room temperature followed by incubation with the Anti-Mouse IgG VisUCyte™ HRP Polymer Antibody (Catalog # VC001). 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 gilal cells. Staining was performed using our IHC Staining with VisUCyte HRP Polymer Detection Reagents protocol.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS. For liquid material, refer to CoA for concentration.
Shipping	Lyophilized product is shipped at ambient temperature. Liquid small pack size (-SP) is shipped with polar packs. Upon receipt, store immediately at the temperature recommended below.
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

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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