

## DESCRIPTION

|                           |   |
|---------------------------|---|
| <b>Species Reactivity</b> | Human   |
| <b>Specificity</b>        | Detects human TMEM59 in direct ELISAs.  |
| <b>Source</b>             | Monoclonal Mouse IgG <sub>1</sub> Clone # 816004  |
| <b>Purification</b>       | Protein A or G purified from hybridoma culture supernatant  |
| <b>Immunogen</b>          | <i>E. coli</i> -derived recombinant human TMEM59<br>Met1-Asn220<br>Accession # Q9BXS4   |
| <b>Formulation</b>        | Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.<br>*Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS. |

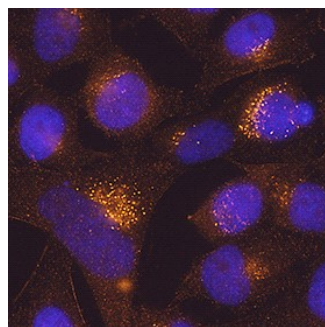
## APPLICATIONS

**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.

|                            | <b>Recommended Concentration</b> | <b>Sample</b> |
|----------------------------|----------------------------------|---------------|
| <b>Immunocytochemistry</b> | 5-25 µg/mL                       | See Below     |

## DATA

### Immunocytochemistry



**TMEM59 in HeLa Human Cell Line.**  
TMEM59 was detected in immersion fixed HeLa human cervical epithelial carcinoma cell line using Mouse Anti-Human TMEM59 Monoclonal Antibody (Catalog # MAB9118) at 25 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Mouse IgG Secondary Antibody (red; Catalog # NL007) and counterstained with DAPI (blue). Specific staining was localized to cytoplasm. View our protocol for [Fluorescent ICC Staining of Cells on Coverslips](#).

## PREPARATION AND STORAGE

|                                |  |
|--------------------------------|--|
| <b>Reconstitution</b>          | Reconstitute at 0.5 mg/mL in sterile PBS.  |
| <b>Shipping</b>                | The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.<br>*Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C   |
| <b>Stability &amp; Storage</b> | <b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>● 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>● 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul> |

## BACKGROUND

TMEM59 is a 324 aa protein with a 21 amino acid transmembrane domain which localizes to the Golgi compartment where it modulates the O-glycosylation and complex N-glycosylation maturation steps of several proteins including APP, BACE1, SEAP and PRNP. It may retain APP in the Golgi and inhibits amyloid beta generation as well APP cleavage by alpha and beta secretases. TMEM59 also contains a 19 aa peptide that acts as a regulator of autophagy in response to bacterial infection by promoting LC3 activation through interaction with ATG16L1, targeting its own endosomal compartment to lysosomes in response to aggregation during *S. aureus* infection.

### References:

1. Ullrich S, et al, J Biol Chem. 2010 Jul 2;285(27):20664
2. Boada-Romero E, et al, EMBO J. 2013 Feb 20;32(4):566