

**DESCRIPTION**

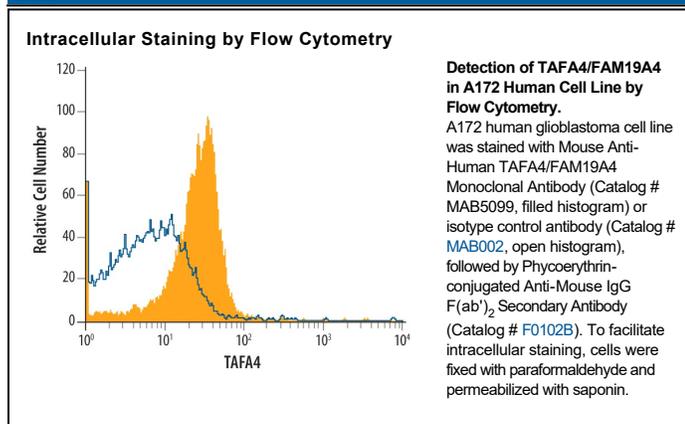
|                           |   |
|---------------------------|---|
| <b>Species Reactivity</b> | Human   |
| <b>Specificity</b>        | Detects human TFAA4/FAM19A4 in direct ELISAs and Western blots. In direct ELISAs and Western blots, no cross-reactivity with recombinant human TFAA1, 2, 3, or 5 is observed.                                 |
| <b>Source</b>             | Monoclonal Mouse IgG <sub>1</sub> Clone # 480103  |
| <b>Purification</b>       | Protein A or G purified from hybridoma culture supernatant  |
| <b>Immunogen</b>          | <i>E. coli</i> -derived recombinant human TFAA4<br>Ser35-Arg140<br>Accession # Q96LR4   |
| <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>Western Blot</b>                             | 1 µg/mL  | Recombinant Human TFAA4/FAM19A4 (Catalog # 5099-TA) under non-reducing conditions only |
| <b>Intracellular Staining by Flow Cytometry</b> | 2.5 µg/10 <sup>6</sup> cells   | See Below  |
| <b>CyTOF-ready</b>                              | Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation. |  |

**DATA**



**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**

TFAA4 (also FAM19A4) is a secreted, 12 kDa member of the FAM19/TFAA family of chemokine-like proteins (1). It is synthesized as a 140 amino acid (aa) precursor that contains a 35 aa signal sequence and a 105 aa mature chain. Like other members of the FAM19/TFAA family, with the exception of TFAA5, mature TFAA1 contains 10 regularly spaced cysteine residues that follow the pattern Cx<sub>7</sub>Cx<sub>13</sub>Cx<sub>14</sub>Cx<sub>11</sub>Cx<sub>4</sub>Cx<sub>5</sub>Cx<sub>10</sub>C, where C represents a conserved cysteine residue and x represents any noncysteine amino acid (1). Human TFAA4 is 90% aa identical to mouse TFAA4 (1). Real-time PCR analysis indicates that TFAA4 mRNA expression is restricted to the central nervous system (CNS), with the highest level in the thalamus (1). TFAAs may modulate immune responses in the CNS by functioning as brain specific chemokines and may act with other chemokines to optimize the recruitment and activity of immune cells in the CNS (1). TFAAs may represent a novel class of neurokinins that act as regulators of immune nervous cells (1, 2). TFAAs may also control axonal sprouting following brain injury (1).

**References:**

1. Tang, Y.T. *et al.* (2004) *Genomics* **83**:727.
2. Benveniste, E. (1998) *Cytokine Growth Factor Rev.* **9**:259.