Human TAPBPR Alexa Fluor® 750-conjugated Antibody

Monoclonal Mouse IgG_{2A} Clone # 1059329

Catalog Number: FAB11337S

100 µg

DESCRIPTION

Species Reactivity	Human
Specificity	Dectects human TAPBPR in direct ELISA.
Source	Monoclonal Mouse IgG_{2A} Clone # 1059329
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Chinese Hamster Ovary cell line, CHO-derived human TAPBPR Ala19-Arg404 Accession # Q9BX59.2
Conjugate	Alexa Fluor 750 Excitation Wavelength: 749 nm Emission Wavelength: 775 nm
Formulation	Supplied 0.2 mg/mL in a saline solution containing BSA and 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.*

Flow Cytometry	Titration recommended for optimal concentration with starting range of 0.1-1 µg/1 million cells. Sample used for this experiment was HEK293 cells transfected with Human TAPBL and eGFP vs irrelevant.

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

TAP-binding protein-like (TAPBPL), also known as TAP binding protein-related (TAPBPR) and Tapasin-related protein (TAPASINR) is a transmembrane protein of the Immunoglobulin (Ig) superfamily (1, 2). TAPBPR was originally isolated as a homologue to TAPASIN but more recently was identified as a novel B7 family-related molecule since it shares sequence, structural, and functional similarities to B7 family members (3). Mature human TAPBPR consists of a lumenal domain containing an IgV and IgC domain, a transmembrane domain, and a cytoplasmic tail which lacks an ER retention motif. Within the lumenal domain, mature human TAPBPR shares 70% and 71% amino acid sequence identity with mouse and rat TAPBPR, respectively. Multiple alternatively spliced TAPBPR isoforms are known to exist with unique properties (4).TAPBPR is widely expressed and, similar to TAPASIN, functions as a both a chaperone protein and peptide editor of MHC class I, but in a peptide-loading complex (PLC) independent manner (5, 6). TAPBPR decreases the rate at which MHC class I molecules mature through the secretory pathway, a role which could be important for peptide selection by MHC class I molecules (7). TAPBPR is also expressed on the surface of T cells and antigen-presenting cells (APCs) and plays an inhibitory role in the proliferation and activation of T cells (4). TAPBPR can be expressed on various cancer cells like leukemia and has the potential to be used in the treatment of autoimmune diseases and transplant rejection, as well as cancer (4).

References:

1. Hermann, C. *et al.* (2015) Tissue antigens **85(3)**:155.
2. Teng, M. *et al.* (2002) European Journal of Immunology **32**:1059.
3. Lin, Y. *et al.* (2021). EMBO Mol Med. **13(5)**:13404.
4. Porter, K.M. *et al.* (2014) Immunology **142**:289.
5. Margulies, D. *et al.* (2020) Current Opinion in Immunology **64**:71.
6. Boyle, L.H. *et al.* (2013) PNAS **110**:3465.
7. Hermann, C. *et al.* (2013) Journal of Immunology **191(11)**:5743.

PRODUCT SPECIFIC NOTICES

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