

TESPA1 Antibody

Catalog # ASC11734

Product Information

Application	WB, IF, ICC, E
Primary Accession	A2RU30
Other Accession	NP_001129502 , 209862861
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	59213
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	TESPA1 antibody can be used for detection of TESPA1 by Western blot at 1 - 2 μ g/ml. Antibody can also be used for Immunocytochemistry starting at 5 μ g/mL. For immunofluorescence start at 20 μ g/mL.

Additional Information

Gene ID	9840
Other Names	Protein TESPA1, Thymocyte-expressed positive selection-associated protein 1, TESPA1, KIAA0748
Target/Specificity	TESPA1; TESPA1 antibody is human specific. At least three isoforms TESPA1 are known to exist.
Reconstitution & Storage	TESPA1 antibody can be stored at 4°C for three months and -20°C, stable for up to one year.
Precautions	TESPA1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	TESPA1
Synonyms	KIAA0748
Function	Required for the development and maturation of T-cells, its function being essential for the late stages of thymocyte development (By similarity). Plays a role in T-cell antigen receptor (TCR)-mediated activation of the ERK and NFAT signaling pathways, possibly by serving as a scaffolding protein that promotes the assembly of the LAT signalosome in thymocytes. May play a role in the regulation of inositol 1,4,5-trisphosphate receptor-mediated Ca(2+) release and mitochondrial Ca(2+) uptake via the mitochondria-associated endoplasmic reticulum membrane (MAM) compartment.

Cellular Location

Cytoplasm. Endoplasmic reticulum membrane. Note=May localize to mitochondria- associated endoplasmic reticulum membrane (MAM)

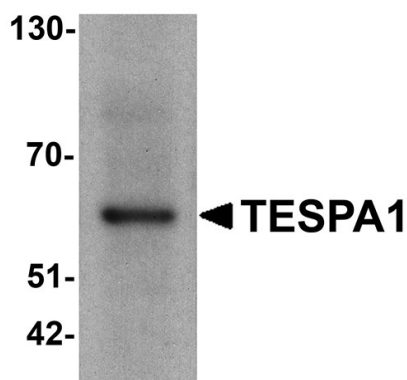
Background

TESPA1 is a critical component of the TCR signalosome and is essential for T cell selection and maturation through the regulation of TCR signaling during T cell development (1). TESP1 encodes a protein of 458 amino acids and is highly conserved among vertebrate species (2). TESP1 expression was tightly regulated during T cell development, with highest expression at the DP stage (3). TESP1 deficiency resulted in failure of positive selection and substantially fewer of CD4+ and CD8+ SP cells in the thymus (1,4).

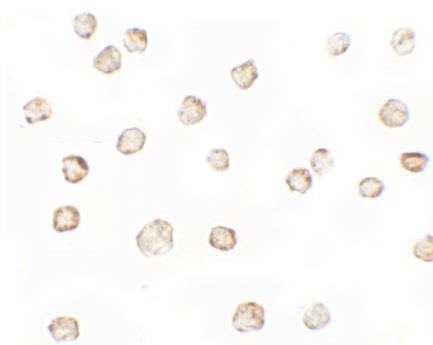
References

- Wang D, Zheng M, Lei L, et al. Tespa1 is involved in late thymocyte development through the regulation of TCR-mediated signaling. *Nat. Immunol.* 2012; 13:560-8.
- Matsuzaki H, Fujimoto T, Ota T, et al. Tespa1 is a novel inositol 1,4,5-trisphosphate receptor binding protein in T and B lymphocytes. *FEBS Open Bio.* 2012; 2:255-9.
- Matsuzaki H, Fujimoto T, Tanaka M, et al. Tespa1 is a novel component of mitochondria-associated endoplasmic reticulum membranes and affects mitochondrial calcium flux. *Biochem. Biophys. Res. Commun.* 2013; 433:322-6.
- Fujimoto T, Matsuzaki H, Tanaka M, et al. Tespa1 protein is phosphorylated in response to store-operated calcium entry. *Biochem. Biophys. Res. Commun.* 2013; 434:162-5.

Images

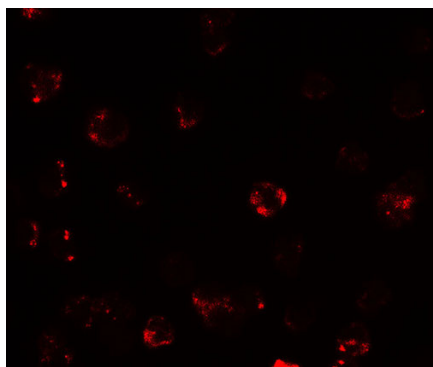


Western blot analysis of TESPA1 in A431 cell lysate with TESPA1 antibody at 1 µg/ml.



Immunocytochemistry of TESPA1 in A431 cells with TESPA1 antibody at 5 µg/mL.

Immunofluorescence of TESPA1 in A431 cells with TESPA1 antibody at 20 µg/mL.



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