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Recombinant Anti-TYROBP Rabbit mAb

Catalog # AP95250

Product Information

Application	WB, IHC, FC, IF/IC
Primary Accession	O43914
Reactivity	Human
Host	Rabbit
Clonality	Monoclonal
Calculated MW	12179

Additional Information

Gene ID	7305
Other Names	DAP12; KARAP; TYRO protein tyrosine kinase-binding protein; DNAX-activation protein 12; Killer-activating receptor-associated protein; KAR-associated protein
Target/Specificity	KLH-conjugated synthetic peptide encompassing a sequence within human TYROBP protein. The exact sequence is proprietary.
Dilution	WB~~WB (1/500 - 1/1000) IHC~~1:100~500 FC~~1:10~50 IF/IC~~N/A
Format	Liquid in PBS, pH 7.3, 50% glycerol, 0.05% BSA, and 0.05% Proclin300.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

Protein Information

Name	TYROBP (HGNC:12449)
Function	Adapter protein which non-covalently associates with activating receptors found on the surface of a variety of immune cells to mediate signaling and cell activation following ligand binding by the receptors (PubMed:10604985, PubMed:9490415, PubMed:9655483). TYROBP is tyrosine-phosphorylated in the ITAM domain following ligand binding by the associated receptors which leads to activation of additional tyrosine kinases and subsequent cell activation (PubMed:9490415). Also has an inhibitory role in some cells (PubMed:21727189). Non-covalently associates with activating receptors of the CD300 family to mediate cell activation (PubMed:15557162, PubMed:16920917, PubMed:17928527, PubMed:26221034). Also mediates cell activation through association with activating receptors of the CD200R family (By similarity). Required for neutrophil activation mediated by integrin (By similarity). Required for the activation of myeloid cells mediated by the CLEC5A/MDL1 receptor (PubMed:10449773). Associates with natural killer (NK) cell receptors such as KIR2DS2 and the KLRD1/KLRC2 heterodimer to

mediate NK cell activation (PubMed:23715743, PubMed:9490415, PubMed:9655483). Also enhances trafficking and cell surface expression of NK cell receptors KIR2DS1, KIR2DS2 and KIR2DS4 and ensures their stability at the cell surface (PubMed:23715743). Associates with SIRPB1 to mediate activation of myeloid cells such as monocytes and dendritic cells (PubMed:10604985). Associates with TREM1 to mediate activation of neutrophils and monocytes (PubMed:10799849). Associates with TREM2 on monocyte-derived dendritic cells to mediate up-regulation of chemokine receptor CCR7 and dendritic cell maturation and survival (PubMed:11602640). Association with TREM2 mediates cytokine-induced formation of multinucleated giant cells which are formed by the fusion of macrophages (PubMed:18957693). Stabilizes the TREM2 C-terminal fragment (TREM2-CTF) produced by TREM2 ectodomain shedding which suppresses the release of pro-inflammatory cytokines (PubMed:25957402). In microglia, required with TREM2 for phagocytosis of apoptotic neurons (By similarity). Required with ITGAM/CD11B in microglia to control production of microglial superoxide ions which promote the neuronal apoptosis that occurs during brain development (By similarity). Promotes pro-inflammatory responses in microglia following nerve injury which accelerates degeneration of injured neurons (By similarity). Positively regulates the expression of the IRAK3/IRAK-M kinase and IL10 production by liver dendritic cells and inhibits their T cell allostimulatory ability (By similarity). Negatively regulates B cell proliferation (PubMed:21727189). Required for CSF1-mediated osteoclast cytoskeletal organization (By similarity). Positively regulates multinucleation during osteoclast development (By similarity).

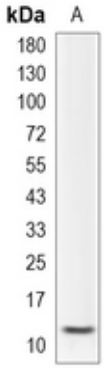
Cellular Location

Cell membrane; Single-pass type I membrane protein

Tissue Location

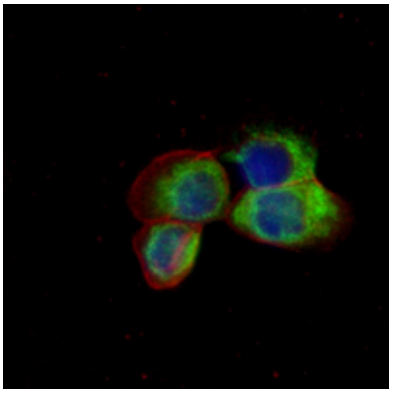
Expressed at low levels in the early development of the hematopoietic system and in the promonocytic stage and at high levels in mature monocytes. Expressed in hematological cells and tissues such as peripheral blood leukocytes and spleen. Also found in bone marrow, lymph nodes, placenta, lung and liver. Expressed at lower levels in different parts of the brain especially in the basal ganglia and corpus callosum.

Images



Western blot analysis of TYROBP expression in human PBMC (A) whole cell lysates. (Predicted band size: 12 kD; Observed band size: 12 kD)

Immunofluorescent analysis of TYROBP staining in RAW264.7 cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a hidified chamber. Cells were washed with PBST and incubated with an AF488-conjugated secondary antibody



(green) in PBS at room temperature in the dark.
Phalloidin - AF594 was used to stain Actin filaments (red).
DAPI was used to stain the cell nuclei (blue).

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