

Recombinant Mouse Tyrobp Protein, Myc/DDK-tagged

Cat. No. Tyrobp-6759M **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Purified recombinant protein of mouse full-length TYRO protein tyrosine kinase binding protein (Tyrobp), with C-terminal MYC/DDK tag, expressed in HEK293T cells.
Species	Mouse
Source	HEK293
Description	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. 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. Also has an inhibitory role in some cells. Non-covalently associates with activating receptors of the CD300 family to mediate cell activation. Also mediates cell activation through association with activating receptors of the CD200R family. Required for neutrophil activation mediated by integrin. Required for the activation of myeloid cells mediated by the CLEC5A/MDL1 receptor. Associates with natural killer (NK) cell receptors such as the KLRD1/KLRC2 heterodimer to mediate NK cell activation. Also associates non-covalently with the NK cell receptors KLRA4/LY49D and KLRA8/LY49H which leads to NK cell activation. Associates with TREM1 to mediate activation of neutrophils and monocytes. Associates with TREM2 on monocyte-derived dendritic cells to mediate up-regulation of chemokine receptor CCR7 and dendritic cell maturation and survival. Association with TREM2 mediates cytokine-induced formation of multinucleated giant cells which are formed by the fusion of

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macrophages. Stabilizes the TREM2 C-terminal fragment (TREM2-CTF) which is produced by TREM2 ectodomain shedding. In microglia, required with TREM2 for phagocytosis of apoptotic neurons. Required with ITGAM/CD11B in microglia to control production of microglial superoxide ions which promote the neuronal apoptosis that occurs during brain development. Promotes proinflammatory responses in microglia following nerve injury which accelerates degeneration of injured neurons. Positively regulates the expression of the IRAK3/IRAK-M kinase and IL10 production by liver dendritic cells and inhibits their T cell allostimulatory ability. Negatively regulates B cell proliferation. Required for CSF1-mediated osteoclast cytoskeletal organization. Positively regulates multinucleation during osteoclast development.

Molecular Mass	12.4 kDa
Purity	> 80% as determined by SDS-PAGE and Coomassie blue staining
Stability	Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles.
Storage	Store at -80 centigrade after receiving vials.
Concentration	>50 µg/mL as determined by microplate BCA method
Storage Buffer	25 mM Tris.HCl, pH 7.3, 100 mM glycine, 10% glycerol.

GENE INFORMATION

Gene Name	Tyrobp TYRO protein tyrosine kinase binding protein [Mus musculus (house mouse)]
Official Symbol	Tyrobp

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Synonyms	TYROBP; TYRO protein tyrosine kinase binding protein; TYRO protein tyrosine kinase-binding protein; KAR-associated protein; DNAX-activation protein 12; killer-activating receptor-associated protein; killer cell activating receptor associated protein; Ly83; DAP12; KARAP
Gene ID	22177
mRNA Refseq	NM_011662
Protein Refseq	NP_035792
UniProt ID	O54885

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