

Recombinant Mouse Tox Protein, Myc/DDK-tagged

Cat. No. Tox-6588M Lot. No. (See product label)

SPECIFICATION

Product Overview

Purified recombinant protein of mouse full-length thymocyte selection-associated high mobility group box (Tox), with C-terminal MYC/DDK tag, expressed in HEK293T cells.

Species

Mouse

Source

HEK293

Description

Transcriptional regulator with a major role in neural stem cell commitment and corticogenesis as well as in lymphoid cell development and lymphoid tissue organogenesis. Binds to GC-rich DNA sequences in the proximity of transcription start sites and may alter chromatin structure, modifying access of transcription factors to DNA. During cortical development, controls the neural stem cell pool by inhibiting the switch from proliferative to differentiating progenitors. Beyond progenitor cells, promotes neurite outgrowth in newborn neurons migrating to reach the cortical plate. May activate or repress critical genes for neural stem cell fate such as SOX2, EOMES and ROBO2. Plays an essential role in the development of lymphoid tissue-inducer (LTi) cells, a subset necessary for the formation of secondary lymphoid organs: peripheral lymph nodes and Peyer's patches. Acts as a developmental checkpoint and regulates thymocyte positive selection toward T cell lineage commitment. Required for the development of various T cell subsets, including CD4-positive helper T cells, CD8-positive cytotoxic T cells, regulatory T cells and CD1D-dependent natural killer T (NKT) cells. Required for the differentiation of common lymphoid progenitors (CMP) to innate lymphoid cells (ILC). May regulate the NOTCH-mediated gene program, promoting differentiation of the ILC lineage. Required at the progenitor

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phase of NK cell development in the bone marrow to specify NK cell lineage commitment. Upon chronic antigen stimulation, diverts T cell development by promoting the generation of exhaustive T cells, while suppressing effector and memory T cell programming. May regulate the expression of genes encoding inhibitory receptors such as PDCD1 and induce the exhaustion program, to prevent the overstimulation of T cells and activation-induced cell death.

Molecular Mass	57.2 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	Tox thymocyte selection-associated high mobility group box [<i>Mus musculus</i> (house mouse)]
Official Symbol	Tox
Synonyms	Tox; thymocyte selection-associated high mobility group box; 1700007F02Rik; thymocyte selection-associated high mobility group box protein TOX; thymocyte selection-associated HMG box; thymus high mobility group box protein TOX

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Gene ID	252838
mRNA Refseq	NM_145711
Protein Refseq	NP_663757
UniProt ID	Q66JW3

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