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DATA SHEET

Rabbit Anti-TOX/TOX2 [MD393R]: RM0162, RM0162RTU7

Intended Use: For Research Use Only

Description: Thymocyte selection-associated high mobility group box protein (TOX), is a crucial 526 amino acid nuclear protein belonging to the evolutionarily conserved high-motility group (HMG)-box superfamily, which plays a significant role in T-cell development regulation. Tox also defines a small subfamily of proteins that include Tox2, Tox3, and Tox4, all of which are highly conserved in vertebrate species but have unique tissue expression patterns and functions. TOX expression is notably upregulated by pre-T cell receptor (pre-TCR) and TCR activation in immature thymocytes, but not in mature thymocytes, highlighting TOX importance in early T-cell maturation stages. This indicates that TOX-dependent transition to the CD4(+)CD8(+) stage is critical for class II major histocompatibility complex-specific T cell development. Additionally, calcineurin activation appears linked to CD8 lineage commitment, as TOX upregulation in double-positive thymocytes depends on calcineurin activity, underscoring TOX pivotal role in T-cell differentiation and immune response. This antibody recognizes endogenous levels of total Tox and Tox2 proteins, but not cross-react with Tox3 or Tox4 proteins.

Specifications

Clone:	MD393R
Source:	Rabbit
Isotype:	IgG
Reactivity:	Human, mouse, rat
Immunogen:	Synthetic peptide corresponding to residues surrounding Ala522 of human Tox protein
Localization:	Nucleus
Formulation:	Antibody in PBS pH7.4, containing BSA and ≤ 0.09% sodium azide (NaN3)
Storage:	Store at 2°- 8°C
Applications:	IHC, IP, WB

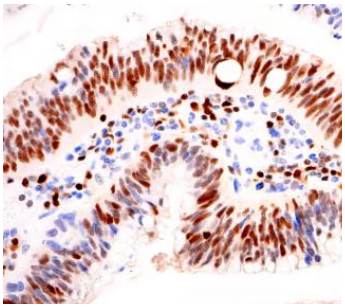
Package:

Description	Catalog No.	Size
TOX/TOX2 [MD393R] Concentrated	RM0162	1 ml
TOX/TOX2 [MD393R] Prediluted	RM0162RTU7	7 ml

IHC Procedure*

Positive Control Tissue:	Colon carcinoma, RCC, gastric adenocarcinoma, tonsil, spleen
Concentrated Dilution:	25-200
Pretreatment:	Tris EDTA pH9.0, 15 minutes Pressure Cooker or 30-60 minutes water bath at 95°-99°C
Incubation Time and Temp:	30-60 minutes @ RT
Detection:	Refer to the detection system manual

* Result should be confirmed by an established diagnostic procedure.



FFPE human colon carcinoma stained with anti-TOX/TOX2 using DAB

References

1. Identification of Differentially Expressed Genes and Prediction of Expression Regulation Networks in Dysfunctional Endothelium. Fang Cheng, et al. Genes (Basel) Aug 30;13(9):1563, 2022. doi: 10.3390/genes13091563.
2. TOX expression in different subtypes of cutaneous lymphoma. Sohshi Morimura, et al. Arch Dermatol Res. Nov;306(9): 843-9, 2014. doi: 10.1007/s00403-014-1501-7.

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