Human Thioredoxin Reductase 2/TRXR2 Antibody

Monoclonal Mouse IgG_{2B} Clone # 575312

Catalog Number: MAB58151

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Thioredoxin Reductase 2/TRXR2 in direct ELISAs. In direct ELISAs, no cross-reactivity with recombinant human (rh) TRXR1 or rhTRXR3 is observed.
Source	Monoclonal Mouse IgG_{2B} Clone # 575312
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	*E. coli*-derived recombinant human Thioredoxin Reductase 2/TRXR2 Met268-Asp393 Accession # Q9NNW7.3
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

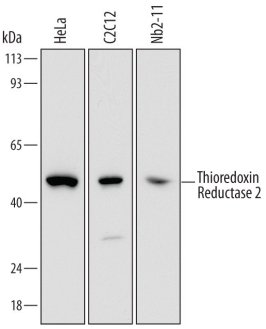
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Western Blot	0.1 µg/mL	See Below
Immunohistochemistry	8-25 µg/mL	See Below

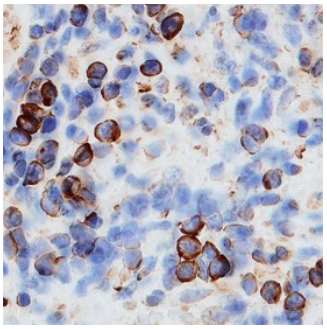
DATA

Western Blot



Detection of Human, Mouse, and Rat Thioredoxin Reductase 2/TRXR2 by Western Blot. Western blot shows lysates of HeLa human cervical epithelial carcinoma cell line, C2C12 mouse myoblast cell line, and Nb2-11 rat lymphoma cell line. PVDF Membrane was probed with 0.1 µg/mL of Mouse Anti-Human Thioredoxin Reductase 2/TRXR2 Monoclonal Antibody (Catalog # MAB58151) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF007). A specific band was detected for Thioredoxin Reductase 2/TRXR2 at approximately 52 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 2.

Immunohistochemistry



Thioredoxin Reductase 2/TRXR2 in Human Prostate. Thioredoxin Reductase 2/TRXR2 was detected in immersion fixed paraffin-embedded sections of human prostate using Mouse Anti-Human Thioredoxin Reductase 2/TRXR2 Monoclonal Antibody (Catalog # MAB58151) at 15 µg/mL overnight at 4 °C. Before incubation with the primary antibody, tissue was subjected to heat-induced epitope retrieval using Antigen Retrieval Reagent-Basic (Catalog # CTS013). Tissue was stained using the Anti-Mouse HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS002) and counterstained with hematoxylin (blue). Specific staining was localized to cytoplasm and plasma membrane of epithelial cells. View our protocol for Chromogenic IHC Staining of Paraffin-embedded Tissue Sections.

PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.5 mg/mL.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Thioredoxin Reductase 2 (TRXR2; also known as Thioredoxin Reductase TR3 and Selenoprotein Z) is a 56 kDa, ubiquitously expressed, mitochondrial selenoprotein and member of the class-I pyridine nucleotide-disulfide oxidoreductase family of proteins. Human TRXR2 is synthesized as a 524 amino acid (aa) precursor that contains a 36 aa transit peptide and a 488 aa mature chain. A selenocysteine residue at position 523 is essential for enzymatic activity. Alternate splicing produces four isoforms. Human TRXR2 shares 86% and 85% aa identity with mouse and rat TRXR2, respectively. TRXR2 maintains thioredoxin in a reduced state and is implicated in the defense against oxidative stress. It may also play a role in redox-regulated cell signaling.