

Human/Mouse/Rat Thioredoxin Reductase 1/TRXR1 Alexa Fluor® 488-conjugated Antibody

Monoclonal Mouse IgG₁ Clone # 489804

Catalog Number: IC7428G

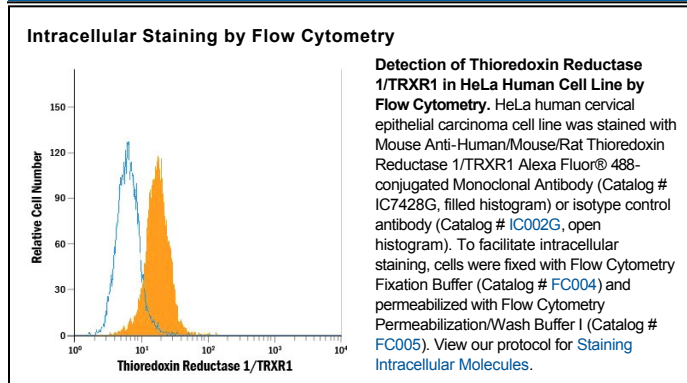
DESCRIPTION	
Species Reactivity	Human/Mouse/Rat
Specificity	Detects mouse Thioredoxin Reductase 1/TRXR1 in direct ELISAs and human, mouse, and rat Thioredoxin Reductase 1/TRXR1 in Western blots.
Source	Monoclonal Mouse IgG ₁ Clone # 489804
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant mouse Thioredoxin Reductase 1/TRXR1 Met1-Ile497 Accession # Q16881
Conjugate	Alexa Fluor 488 Excitation Wavelength: 488 nm Emission Wavelength: 515-545 nm
Formulation	Supplied in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details. *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

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
Intracellular Staining by Flow Cytometry	5 µL/10 ⁶ cells	See Below

DATA



PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. <ul style="list-style-type: none"> ● 12 months from date of receipt, 2 to 8 °C as supplied.

BACKGROUND

Thioredoxin reductase 1 (TRXR1) is an approximately 70 kDa member of the class-I pyridine nucleotide-disulfide oxidoreductase family. Human TRXR1 is 649 amino acids (aa) in length. Residues 151-152 constitute a propeptide that is deleted from the mature protein. Splicing variants produce five additional isoforms for human TRXR1. Isoform 2 has a 32 aa substitution for aa 107-138 and a deletion of aa 1-106. Isoform 3 has a deletion of aa 1-51 and a 49 aa substitution for aa 52-100. Isoform 4 is missing aa 1-98 and has a 3 aa substitution for aa 99-101. Isoform 5 has a deletion of aa 1-150. Residues 56-156 make up a glutaredoxin domain, and residues 520-632 constitute a pyridine nucleotide-disulfide oxidoreductase dimerization domain. In addition, there are three phosphotyrosines at positions 161, 163, and 281, and a selenocysteine at position 648. Human TRXR1 shares 74% and 70% aa sequence identity with mouse and rat TRXR1, respectively. Isoform 1 is involved in glutaredoxin activity as well as thioredoxin reductase activity, and it induces actin and tubulin polymerization, which leads to formation of cell membrane protrusions. Isoform 4 has been shown to enhance the transcriptional activity of the beta receptor only. Finally, isoform 5 mediates cell death induced by a combination of interferon-beta and retinoic acid. Isoform 1 is expressed mostly in the Leydig cells, but also in the ovary, spleen, heart, liver, kidney, and pancreas and in a number of cancer cell lines. Isoform 4 is widely expressed with highest levels in the kidney, uterus, testis, ovary, prostate, placenta, and fetal liver.

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