Catalog No. LF-MA0020

MONOCLONAL ANTIBODY

Anti-Thioredoxin Reductase 1 (5A5)

Background : The mammalian thioredoxin reductases (TrxRs) are a family of selenocysteine-containing pyridine nucleotide-disulfide oxido-reductases. All the mammalian TrxRs are homologous to glutathione reductase with respect to primary structure including the conserved redox catalytic site (-Cys-Val-Asn-Val-Gly-Cys-) but distinctively with a C-terminal extension containing a catalytically active penultimate selenocysteine (SeCys) residue in the conserved sequence(-Gly-Cys-SeCys-Gly). TrxR is homodimeric protein in which each monomer includes an FAD prosthetic group, a NADPH binding site and a redox catalytic site. Electrons are transferred from NADPH via FAD and the active-site disulfide to C-terminal SeCys-containing redox center, which then reduces the substrate like thioredoxin. The members of TrxR family are 55 – 58 kilodalton in molecular size and composed of three isoforms including cytosolic TrxR1, mitochondrial TrxR2, and TrxR3, known as Trx and GSSG reductase (TGR). TrxR plays a key role in protection of cells against oxidative stress and redox-regulatory mechanism of transcription factors and various biological phenomena (1).

Immunogen : Recombinant human protein purified from *E.coli*

Host : Mouse

Clone number : 5A5 **Isotype :** IgG1, k

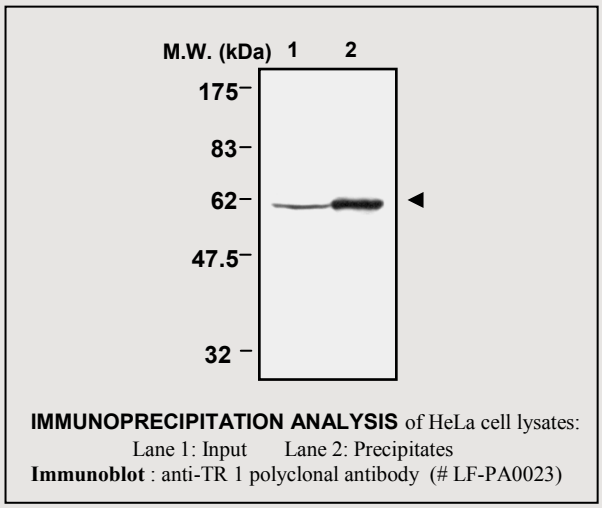
Size : 100ul

Composition : PBS containing 50% glycerol

Positive control : HeLa cell lysates

Storage : Store for 1 year at -20°C from date of shipment

Species cross reactivity		
Human	**Mouse**	**Rat**
+	-	-



IMMUNOPRECIPITATION ANALYSIS of HeLa cell lysates:
Lane 1: Input Lane 2: Precipitates
Immunoblot : anti-TR 1 polyclonal antibody (# LF-PA0023)

Applications :
ELISA
Immunoprecipitation (1-2ul/400ul lysates)

Background Reference :
1) Mustacich, D. and Powis,G. (2000) Biochem J. 15. 346 Pt 1:1-8.

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