

Thioredoxin (*E. coli*), (recombinant) (His- tag)

Thioredoxin (Trx) is a redox protein of approximately 12 kDa. Its primary domain is conserved across a number of Trx family members and contains a conserved catalytic site Cys-Gly-Pro-Cys. It is ubiquitous and found in many organisms from bacteria to mammals. Trx has been shown to function in cell proliferation, redox signaling and inhibition of apoptosis. Trx is reduced by the NADPH-dependent flavoenzyme thioredoxin reductase, and in turn reduces other proteins such as protein disulfide isomerase (PDI) by cysteine thiol-disulfide exchange. Trx has been reported to selectively activate the DNA binding of a number of transcription factors such as p53, NFkB, AP1 and glucocorticoid receptor, resulting in alteration of gene transcription. The reduced Trx can supply reducing equivalents for ribonucleotide reductase, the essential enzyme for DNA synthesis, and thioredoxin peroxidase. As a cofactor for the peroxiredoxins, Trx plays a direct role in reducing oxidative species such as H_2O_2 .

Citations: 1

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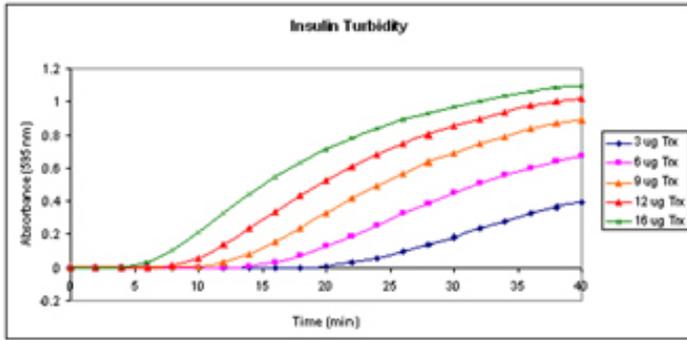
Ordering Information

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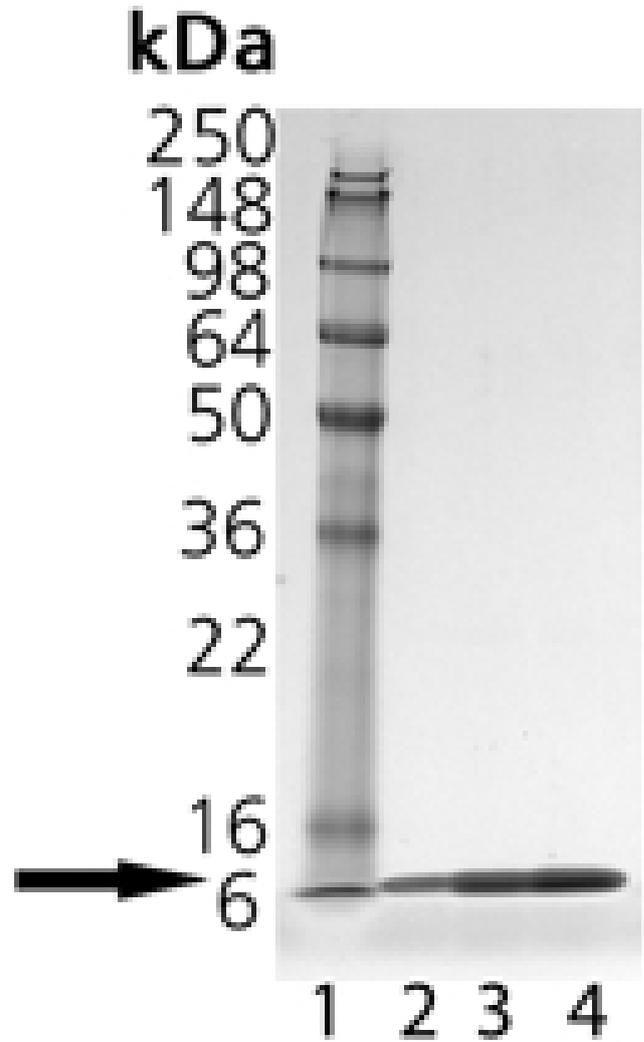
ADI-SPP-892-1	1mg
ADI-SPP-892-200	200µg

Manuals, SDS & CofA

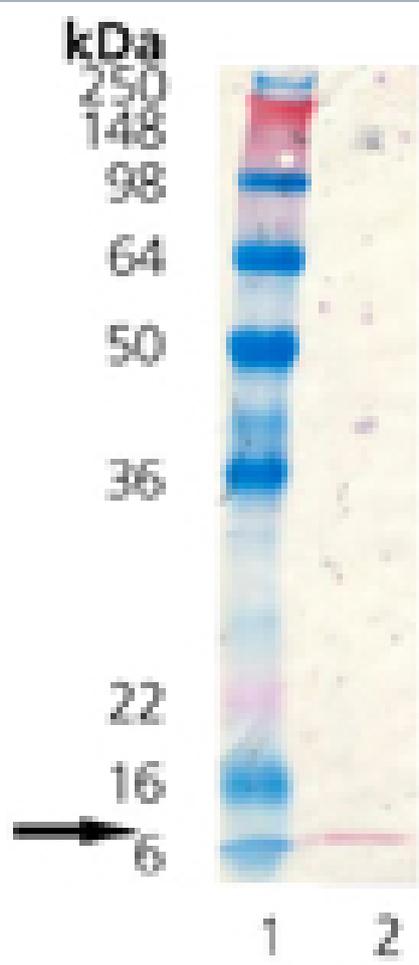
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Variable amounts of thioredoxin incubated with Insulin in the presence of DTT. Activity is measured as increase in absorbance over time.



SDS-PAGE analysis: Lane 1: MWM, Lane 2: 1 μ g, Lane 3: 2 μ g, Lane 4: 5 μ g Thioredoxin.



Western Blot analysis: Lane 1: MWM, Lane 2: Thioredoxin, probed with thioredoxin mAb.

Handling & Storage

Long Term Storage -80°C

Shipping Dry Ice

Regulatory Status RUO - Research Use Only

Product Details

Alternative Name

Trx

Application Notes

Western blot control.

Formulation

Liquid. In 50mM TRIS, pH 7.5, containing 100mM sodium chloride and 1mM EDTA.

MW

~12kDa

Purity

≥95% (SDS-PAGE; Western blot)

Purity Detail

Purified by multi-step chromatography.

Source

Produced in *E. coli*. *E. coli* thioredoxin is fused at the N-terminus to a His-tag.

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