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## PRODUCT SPECIFICATION

<b>Product No.</b>	<b>TRX-03B</b>
<b>Product description:</b>	<b>Human Thioredoxin 1</b>
<b>Lot No.</b>	<b>10</b>
<b>Specifications:</b>	<p>One ampoule contains 250 µg recombinant human thioredoxin 1 (Trx1), which was lyophilized from 34 µl 50 mM Tris-Cl, pH 7.5 1 mM EDTA.</p> <p>Use: Reconstitute with 100 µl H<sub>2</sub>O. This gives a solution of 210 µM thioredoxin. The protein is oxidized ( two disulfides) and can be reactivated by addition of a 5-fold molar excess of DTT or by use of Reductacryl®reagent (Calbiochem). Alternately incubate with NADPH and TrxR.</p>
<b>Reference:</b>	Ren, X. et al. (1998) Biochemistry, 32, 9701-9708.
<b>Storage:</b>	Keep at +4°C or alternatively reconstituted protein in aliquots at -20°C
<b>Examples of use:</b>	Activity can be measured with the thioredoxin-dependent reduction of insulin using rat recombinant thioredoxin reductase (Product No TR-03). The test mixture should contain 160 µM insulin and 0.2 mM NADPH in 0.1 M potassium phosphate, 2mM EDTA, pH 7,0. In the presence of 5 µM human thioredoxin, 7 nM of mammalian thioredoxin reductase will give a decrease of absorbtion at 340 nm of 0.100 min <sup>-1</sup> .

**NOTE!** Make sure to reconstitute all of the lyophilized protein in the ampoule. After adding buffer, close the screw-cap again, shake vigorously, then centrifuge shortly, in order to recover liquid from tube cap and walls.

The oxidized protein can display a lag phase in enzyme assays. See Ren, X. et al. (1998) Biochemistry, 32, 9701-9708.