

# Anti-Glutathione Peroxidase 1 Antibody [JJ092-07] ET1701-84



<b>Product Type:</b>	Recombinant Rabbit monoclonal IgG, primary antibodies
<b>Species reactivity:</b>	Human, Mouse, Rat
<b>Applications:</b>	WB, IP
<b>Molecular Wt:</b>	22 kDa
<b>Clone number:</b>	JJ092-07

**Description:** Glutathione peroxidase 1, also known as GPx1, is an enzyme that in humans is encoded by the GPX1 gene on chromosome 3. This gene encodes a member of the glutathione peroxidase family. Glutathione peroxidase functions in the detoxification of hydrogen peroxide, and is one of the most important antioxidant enzymes in humans. GPX1 is ubiquitously expressed in many tissues, where it protects cells from oxidative stress. Within cells, it localizes to the cytoplasm and mitochondria. As a glutathione peroxidase, GPx1 functions in the detoxification of hydrogen peroxide, specifically by catalyzing the reduction of hydrogen peroxide to water. The glutathione peroxidase also catalyzes the reduction of other organic hydroperoxides, such as lipid peroxides, to the corresponding alcohols. GPx1 typically uses glutathione (GSH) as the reductant, but when glutathione synthetase (GSS) is, as in brain mitochondria,  $\gamma$ -glutamylcysteine can serve as the reductant instead. [clarification needed][7] The protein encoded by this gene protects from CD95-induced apoptosis in cultured breast cancer cells and inhibits 5-lipoxygenase in blood cells, and its overexpression delays endothelial cell death and increases resistance to toxic challenges, especially oxidative stress. His protein is one of only a few proteins known in higher vertebrates to contain selenocysteine, which occurs at the active site of glutathione peroxidase and is coded by the nonsense (stop) codon TGA.

**Immunogen:** Synthetic peptide within C-terminal human Glutathione Peroxidase 1.

**Positive control:** HepG2 cell lysate, THP-1 cell lysate.

**Subcellular location:** Cytoplasm.

**Database links:** SwissProt: P07203 Human | P11352 Mouse | P04041 Rat

**Recommended Dilutions:**

**WB** 1:500-1:2,000

**IP** Use at an assay dependent concentration.

**Storage Buffer:** 1\*TBS (pH7.4), 0.05% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

**Storage Instruction:** Shipped at 4°C. Store at +4°C short term (1-2 weeks). It is recommended to aliquot into single-use upon delivery. Store at -20°C long term.

**Purity:** Protein A affinity purified.

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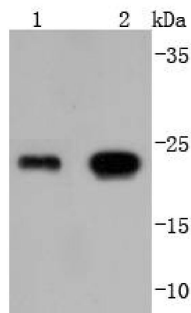
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## Images



**Fig1:** Western blot analysis of Glutathione Peroxidase 1 on different lysates. Proteins were transferred to a PVDF membrane and blocked with 5% BSA in PBS for 1 hour at room temperature. The primary antibody (ET1701-84, 1/500) was used in 5% BSA at room temperature for 2 hours. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1:5,000 dilution was used for 1 hour at room temperature.

**Positive control:**

Lane 1: HepG2 cell lysate

Lane 2: THP-1 cell lysate

**Note:** All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

## Background References

1. Crilly MJ et al. The role of Nrf2 in skeletal muscle contractile and mitochondrial function. *J Appl Physiol* (1985) 121:730-40 (2016).
2. Di Filippo C et al. Daily Oxygen/O3 Treatment Reduces Muscular Fatigue and Improves Cardiac Performance in Rats Subjected to Prolonged High Intensity Physical Exercise. *Oxid Med Cell Longev* 2015:190640 (2015).

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