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Review

Thioredoxin and redox signaling: roles of the thioredoxin system in control of cell fate

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[1] Abbreviations used: ROS, reactive oxygen species; Trx, thioredoxin; TrxR, thioredoxin reductase, TXNIP, thioredoxin-interacting protein; LPS, lipopolysaccharide; Prx, peroxiredoxin; Grx, glutaredoxin; ASK1, apoptosis signal-regulating kinase 1; JNK, c-Jun N-terminal kinase; TNF-α, tumor necrosis factor-α; AD, Alzheimer's disease; Aβ, amyloid-β; ER, endoplasmic reticulum; ALS, amyotrophic lateral sclerosis; SOD1, Cu/Zn-superoxide dismutase; IRS-1, insulin receptor substrate-1; TRP, transient receptor potential; AMPK, 5'-AMP-activated protein kinase

Keywords: Thioredoxin, Redox, Oxidative stress, Signal transduction, ASK1, Cell fate