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QSOX1 Antibody

Catalog # ASC11921

Product Information

Application	WB, IF, E
Primary Accession	O00391
Other Accession	NP_002817, 13325075
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	82578
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	QSOX1 antibody can be used for detection of QSOX1 by Western blot at 1 - 2 g/ml. For immunofluorescence start at 20 g/mL.

Additional Information

Gene ID	5768
Other Names	Sulfhydryl oxidase 1, hQSOX, 1.8.3.2, Quiescin Q6, QSOX1, QSCN6
Target/Specificity	QSOX1; QSOX1 antibody is human and mouse reactive. QSOX1 antibody is predicted to not cross-react with QSOX2.
Reconstitution & Storage	QSOX1 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year.
Precautions	QSOX1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	QSOX1
Synonyms	QSCN6 {ECO:0000303|PubMed:9878249}
Function	Catalyzes the oxidation of sulfhydryl groups in peptide and protein thiols to disulfides with the reduction of oxygen to hydrogen peroxide (PubMed:17331072, PubMed:18393449, PubMed:23704371, PubMed:23867277, PubMed:30367560). Plays a role in disulfide bond formation in a variety of extracellular proteins (PubMed:17331072, PubMed:22801504, PubMed:23867277, PubMed:30367560). In fibroblasts, required for normal incorporation of laminin into the extracellular matrix, and thereby for normal cell-cell adhesion and cell migration (PubMed:23704371, PubMed:23867277, PubMed:30367560).

Cellular Location	[Isoform 1]: Golgi apparatus membrane; Single-pass membrane protein. Secreted. Note=A small proportion is secreted, probably via a proteolytic cleavage that removes the membrane anchor
Tissue Location	Expressed in heart, placenta, lung, liver, skeletal muscle, pancreas and very weakly in brain and kidney {ECO:0000269|PubMed:10708601, ECO:0000269|Ref.8}

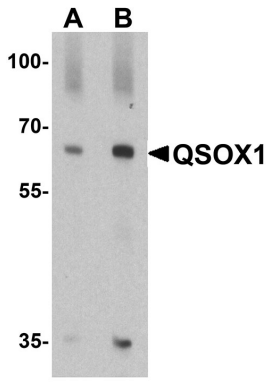
Background

The QSOX1 gene, also known as Quiescin Q6, is a fusion of two ancient genes: thioredoxin and ERV1. Its expression is induced as fibroblasts begin to exit the proliferative cycle and enter quiescence, suggesting that this gene plays an important role in growth regulation (1). The QSOX1 protein oxidizes sulfhydryl groups to form disulfide bonds in proteins. QSOX1 expression is induced by hypoxia (2) and appears to protect cells against oxidative stress-induced apoptosis (3).

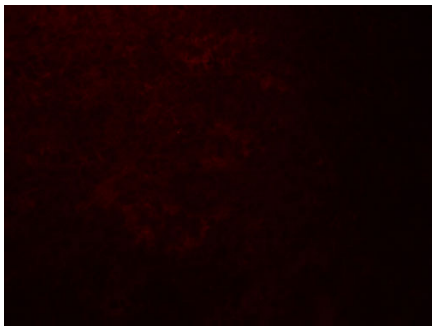
References

Coppock DL, Cina-Poppe D, and Gilleran S. The quiescin Q6 gene (QSCN6) is a fusion of two ancient gene families: thioredoxin and ERV1. Genomics 1998; 54:460-8.
Shi CY, Fan Y, Liu B, et al. HIF1 contributes to hypoxia-induced pancreatic cancer cells invasion via promoting QSOX1 expression. Cell Physiol. Biochem. 2013; 32:561-8.
Morel C, Adami P, Musard JF, et al. Involvement of sulfhydryl oxidase QSOX1 in the protection of cells against oxidative stress-induced apoptosis. Exp. Cell Res. 2007; 313:3971-82.

Images



Western blot analysis of QSOX1 in EL4 cell lysate with QSOX1 antibody at (A) 1 and (B) 2 µg/ml.



Immunofluorescence of QSOX1 in human spleen tissue with QSOX1 antibody at 20 µg/mL.