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STEAP3 Antibody

Catalog # ASC10574

Product Information

Application	WB, IF, E, IHC-P
Primary Accession	Q658P3
Other Accession	AAH95421, 127801437
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	54601
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	STEAP3 antibody can be used for detection of STEAP3 by Western blot at 1 - 2 g/mL. Antibody can also be used for immunohistochemistry starting at 2.5 g/mL. For immunofluorescence start at 20 g/mL.

Additional Information

Gene ID	55240
Other Names	Metalloreductase STEAP3, 1.16.1.-, Dudulin-2, Six-transmembrane epithelial antigen of prostate 3, Tumor suppressor-activated pathway protein 6, hTSAP6, pHyde, hpHyde, STEAP3, TSAP6
Target/Specificity	STEAP3; This STEAP3 antibody does not cross-react with other STEAP proteins.
Reconstitution & Storage	STEAP3 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	STEAP3 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	STEAP3 (HGNC:24592)
Synonyms	TSAP6
Function	Integral membrane protein that functions as a NADPH-dependent ferric-chelate reductase, using NADPH from one side of the membrane to reduce a Fe(3+) chelate that is bound on the other side of the membrane (PubMed:26205815). Mediates sequential transmembrane electron transfer from NADPH to FAD and onto heme, and finally to the Fe(3+) chelate (By similarity). Can also reduce Cu(2+) to Cu(1+) (By similarity). Mediates efficient

	transferrin-dependent iron uptake in erythroid cells (By similarity). May play a role downstream of p53/TP53 to interface apoptosis and cell cycle progression (By similarity). Indirectly involved in exosome secretion by facilitating the secretion of proteins such as TCTP (PubMed:15319436, PubMed:16651434).
Cellular Location	Endosome membrane {ECO:0000250|UniProtKB:Q8CI59}; Multi-pass membrane protein. Note=Localizes to vesicular- like structures at the plasma membrane and around the nucleus
Tissue Location	Expressed in adult bone marrow, placenta, liver, skeletal muscle and pancreas. Down-regulated in hepatocellular carcinoma.

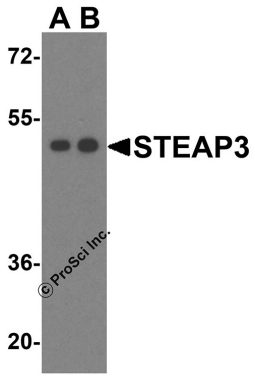
Background

STEAP3 Antibody: The six-transmembrane epithelial antigen of prostate 3 (STEAP3) is a member of a family of metalloreductases identified as cell-surface antigens in prostate tissue. Similar to two other members of the STEAP family (STEAP 2 and STEAP4), STEAP3 promotes both iron and copper reduction. STEAP3 is highly expressed in hematopoietic tissues and colocalizes with the transferrin endosome. Overexpression of STEAP3 stimulates iron reduction; mice lacking STEAP3 are deficient in erythroid ferrireductase activity, suggesting that STEAP3 is an endosomal ferrireductase required for transferrin-dependent iron uptake in erythroid cells.

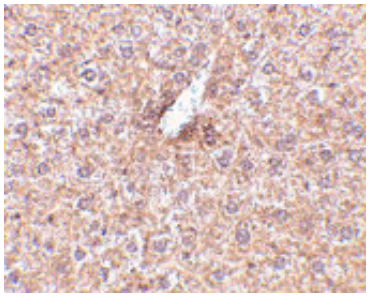
References

Ohgami RS, Campagna DR, Greer EL, et al. Identification of a ferrireductase required for efficient transferrin-dependent iron uptake in erythroid cells. Nat. Genet.2005; 37:1264-9.
Ohgami RS, Campagna DR, McDonald A, et al. The Steap proteins are metalloreductases. Blood2006; 108:1388-94.
Graham RM, Chua ACG, Herbison CE, et al. Liver iron transport. World J. Gastroenterol.2007; 13:4725-36.

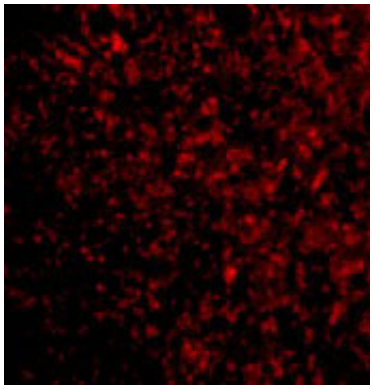
Images



Western blot analysis of STEAP3 in HeLa cell lysate with STEAP3 antibody at (A) 1 and (B) 2 µg/mL.



Immunohistochemistry of STEAP3 in mouse liver tissue with STEAP3 antibody at 2.5 µg/mL.



Immunofluorescence of STEAP3 in Mouse Liver cells with STEAP3 antibody at 20 µg/mL.

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