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STEAP4 Antibody

Catalog # ASC10575

Product Information

Application	WB, E
Primary Accession	Q687X5
Other Accession	EAW76907, 119597313
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	51981
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	STEAP4 antibody can be used for detection of STEAP4 by Western blot at 0.5 - 1 □g/mL.

Additional Information

Gene ID	79689
Other Names	Metalloreductase STEAP4, 1.16.1.-, Six-transmembrane epithelial antigen of prostate 4, SixTransMembrane protein of prostate 2, Tumor necrosis factor, alpha-induced protein 9, STEAP4, STAMP2, TNFAIP9
Target/Specificity	STEAP4; At least two isoforms are known to exist for this protein. This STEAP4 antibody does not cross-react with other STEAP proteins.
Reconstitution & Storage	STEAP4 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	STEAP4 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	STEAP4
Synonyms	STAMP2 {ECO:0000303|PubMed:15897894}, TN
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. Mediates sequential transmembrane electron transfer from NADPH to FAD and onto heme, and finally to the Fe(3+) chelate (PubMed:30337524). Can also reduce Cu(2+) to Cu(1+) (By similarity). Plays a role in systemic metabolic

	homeostasis, integrating inflammatory and metabolic responses (By similarity). Associated with obesity and insulin-resistance (PubMed:18381574, PubMed:18430367). Involved in inflammatory arthritis, through the regulation of inflammatory cytokines (PubMed:19660107). Inhibits anchorage-independent cell proliferation (PubMed:19787193).
Cellular Location	Cell membrane; Multi-pass membrane protein. Golgi apparatus membrane; Multi-pass membrane protein. Early endosome membrane; Multi-pass membrane protein
Tissue Location	Ubiquitous. Highly expressed in adipose tissue. Expressed in placenta, lung, heart and prostate. Detected at lower levels in liver, skeletal muscle, pancreas, testis and small intestine Highly expressed in joints of patients with rheumatoid arthritis and localized with CD68 cells, a marker for macrophages

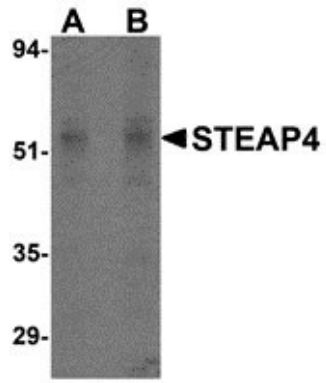
Background

STEAP4 Antibody: The six-transmembrane epithelial antigen of prostate 4 (STEAP4) 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 STEAP3), STEAP4 promotes both iron and copper reduction. STEAP4 is highly expressed in placenta, lung, heart and prostate tissues, and overexpressed in prostate cancer cells compared to normal prostate cells. Overexpression of STEAP4 in prostate cells significantly increases cell growth and colony formation, suggesting STEAP4 may have a role in cell proliferation and prostate cancer progression.

References

Korkmaz CG, Korkmaz KS, Kurys P, et al. Molecular cloning and characterization of STAMP2, an androgen-regulated six transmembrane protein that is overexpressed in prostate cancer. Oncogene 2005; 24:4934-45.
Ohgami RS, Campagna DR, McDonald A, et al. The Steap proteins are metalloreductases. Blood2006; 108:1388-94.

Images



Western blot analysis of STEAP4 in rat liver tissue lysate with STEAP4 antibody at (A) 0.5 and (B) 1 µg/mL.