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Datasheet for 600-401-EV6

STEAP1 Antibody

Overview

Description:	Anti-STEAP1 (RABBIT) Antibody - 600-401-EV6
Item No.:	600-401-EV6
Size:	100 µg
Applications:	ELISA, IF, IHC, WB
Reactivity:	Human, Mouse, Rat
Host Species:	Rabbit

Product Details

Background:	The six-transmembrane epithelial antigen of prostate 1 (STEAP1) was the first member of a family of metalloreductases identified as cell-surface antigens in prostate tissue. The normal function of STEAP is still uncertain; unlike other members of the STEAP family, STEAP1 does not promote iron or copper reduction or uptake and lacks the FNO-like reductase domain critical for activity. However, its expression is highly increased in multiple cancer cell lines, including prostate, bladder, colon, and ovarian cancers. Supporting this is evidence that STEAP1 peptides can be used to stimulate CD8+ T cells from healthy donors, enabling them to recognize STEAP1-positive human tumor cells, suggesting that STEAP1 may a potential target for cancer immunotherapy. At least three isoforms of STEAP1 are known to exist.
Synonyms:	STEAP1 Antibody, STEAP, PRSS24, STEAP, Metalloreductase STEAP1, Six-transmembrane epithelial antigen of prostate 1
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	IgG

Target Details

Gene Name:	STEAP1
Reactivity:	Human, Mouse, Rat
Immunogen Type:	Conjugated Peptide

Immunogen:	Anti-STEAP1 antibody was prepared from whole rabbit serum produced by repeated immunizations with a 16 amino acid synthetic peptide from near the internal region of human STEAP1.
Purity/Specificity:	Anti-STEAP1 Antibody was affinity purified from monospecific antiserum by immunoaffinity chromatography. This STEAP1 antibody does not cross-react with other STEAP proteins.
Relevant Links:	• UniProtKB - Q9UHE8 • GeneID - 26872 • NCBI - NP_036581.1

Application Details

Tested Applications:	ELISA, IF, IHC, WB
Application Note:	Anti-STEAP1 Antibody has been tested for use in ELISA, Western Blotting, Immunohistochemistry and Immunofluorescence. Specific conditions for reactivity should be optimized by the end user. Expect a band at approximately 40 kDa in Western Blots of specific cell lysates and tissues.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1:10,000 - 1:20,000
IF:	20 µg/mL
IHC:	2.5 µg/mL
WB:	1-2 µg/mL

Formulation

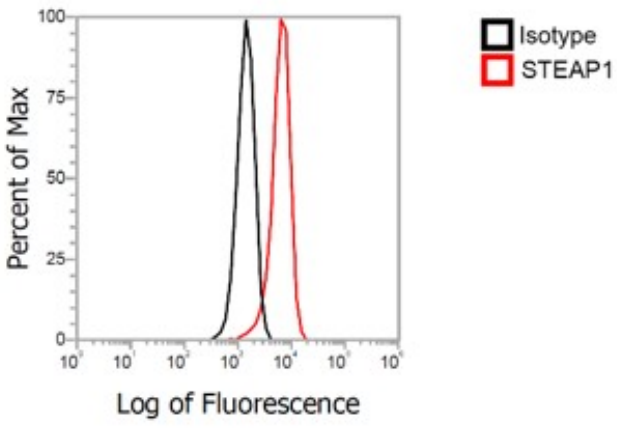
Physical State:	Liquid (sterile filtered)
Concentration:	1.0 mg/ml by UV absorbance at 280 nm
Buffer:	0.01 M Sodium Phosphate, 0.25 M Sodium Chloride, pH 7.2
Preservative:	0.02% (w/v) Sodium Azide
Stabilizer:	None

Shipping & Handling

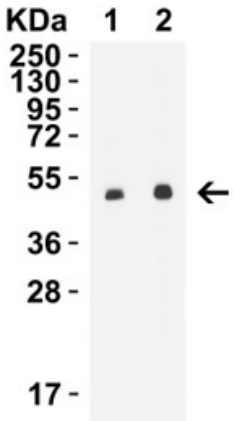
Shipping Condition:	Dry Ice

Storage Condition:	Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
Expiration:	Expiration date is one (1) year from date of receipt.

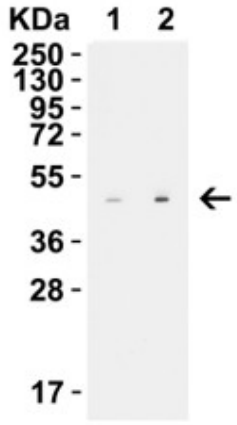
Images



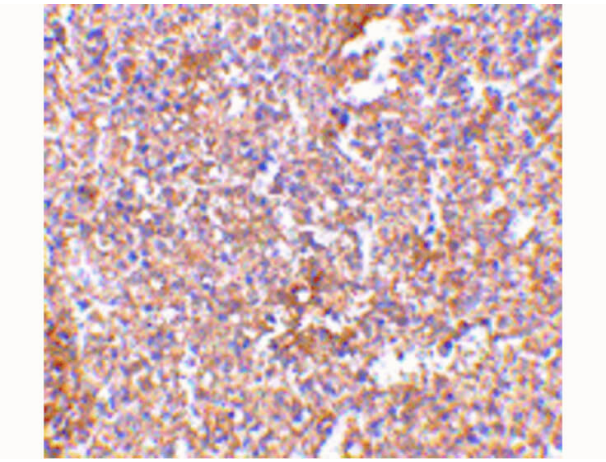
Flow Cytometry
Flow Cytometry Validation of STEAP1 in A549 Cells. 1X10^6/mL A549 cells were intracellularly stained with 2 µg/mL of STEAP1 antibody (red) or Rabbit IgG isotype control (black) at RT for 30 min, followed by PSFlo 488 conjugated goat anti-rabbit IgG secondary antibody staining (1:1000) at RT for 30 min. Cells were fixed with 4% PFA and permeabilized with 0.1% Triton X-100 in PBS.



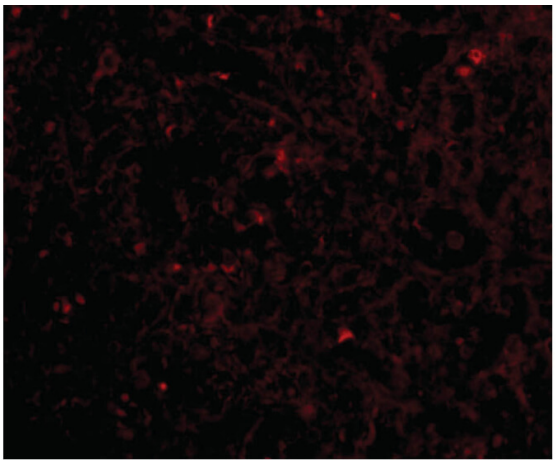
Western Blot
WB Validation using STEAP1. Loading: 10 µg of mouse brain lysate per lane. Lane 1: 0.5 µg/mL, Lane 2: 1 µg/mL. Antibodies: Steap1, 1 h incubation at RT in 5% NFDM/TBST. Secondary: Goat anti-rabbit IgG HRP conjugate at 1:10000 dilution. Exposure: 30 sec.



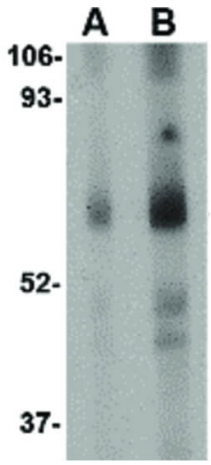
Western Blot
WB Validation. Loading: 10 µg of rat brain lysate per lane. Lane 1: 0.5 µg/mL, Lane 2: 1 µg/mL. Antibodies: Steap1, 1 h incubation at RT in 5% NFDM/TBST. Secondary: Goat anti-rabbit IgG HRP conjugate at 1:10000 dilution. Exposure: 30 sec.



Immunohistochemistry
Immunohistochemistry of STEAP1 antibody. Tissue: Human spleen tissue. Fixation: formalin fixed paraffin embedded. Antigen retrieval: not required. Primary antibody: STEAP1 antibody at 2.5 µg/mL for 1 h at RT. Secondary antibody: Peroxidase rabbit secondary antibody at 1:10,000 for 45 min at RT. Localization: STEAP1 is nuclear and cytoplasmic. Staining: STEAP1 as precipitated red signal with hematoxylin purple nuclear counterstain.



Immunofluorescence Microscopy
Immunofluorescence Microscopy of STEAP1 antibody. Tissue: Human spleen tissue. Fixation: 0.5% PFA. Antigen retrieval: not required. Primary antibody: STEAP1 antibody at 20 µg/mL for 1 h at RT. Secondary antibody: Fluorescein rabbit secondary antibody at 1:10,000 for 45 min at RT. Staining: STEAP1 as a red fluorescent signal.



Western Blot

Western Blot of STEAP1 antibody. Lane A: Human spleen tissue lysate at 1 µg/mL. Lane B: Human spleen tissue lysate at 2 µg/mL. Load: 35 µg per lane. Secondary antibody: Peroxidase rabbit secondary antibody at 1:10,000 for 45 min at RT. Block: 5% BLOTTO overnight at 4°C. Predicted/Observed size: 87.3 kDa, ~70 kDa for STEAP1. Other band(s): STEAP1 splice variants and isoforms.

Disclaimer

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