Human STEAP2 Alexa Fluor® 350-conjugated Antibody

Monoclonal Mouse IgG_{2A} Clone # 1114318

Catalog Number: FAB11742U

100 µg

DESCRIPTION

Species Reactivity	Human
Specificity	Detects a synthetic peptide specific for human STEAP-2 around amino acid 460 in Direct ELISA.
Source	Monoclonal Mouse IgG_{2A} Clone # 1114318
Purification	Protein A or G purified from cell culture supernatant
Immunogen	Synthetic Peptide Accession # Q8NFT2
Conjugate	Alexa Fluor 350 Excitation Wavelength: 346 nm Emission Wavelength: 442 nm
Formulation	Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

Immunocytochemistry	Optimal dilution of this antibody should be experimentally determined.
Immunohistochemistry	Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

Six-transmembrane epithelial antigen of the prostate 2 (STEAP2) is a member of the STEAP family of metalloreductases, with a molecular weight of approximately 49 kDa. STEAP2 is an integral membrane protein that plays a role in cellular homeostasis by facilitating the reduction of metal ions such as iron and copper, which are critical cofactors for various enzymatic processes. STEAP2 is highly expressed in prostate tissue and is also detected at lower levels in other tissues, supporting its emerging role in tissue-specific metabolic regulation. Overexpression of STEAP2 has been implicated in prostate cancer progression, where it contributes to the proliferation, migration, and invasiveness of tumor cells. The dysregulation of STEAP2 expression has also been associated with other malignancies, suggesting its broader significance in cancer biology. Additionally, STEAP2 has garnered interest as a potential biomarker for cancer diagnosis and prognosis, as well as a therapeutic target, particularly in prostate and other hormone-regulated cancers.

References:

1. Hubert RS, Vivanco I, Chen E, Rastegar S, Leong K, Mitchell SC, Madraswala R, Zhou Y, Kuo J, Raitano AB, Jakobovits A, Saffran DC, Afar DE. STEAP: a prostate-specific cell-surface antigen highly expressed in human prostate tumors. Proc Natl Acad Sci U S A. 1999 Dec 7;96(25):14523-8. doi: 10.1073/pnas.96.25.14523. PMID: 10588738; PMCID: PMC24469.
2. Ohgami RS, Campagna DR, McDonald A, Fleming MD. The Steap proteins are metalloreductases. Blood. 2006 Aug 15;108(4):1388-94. doi: 10.1182/blood-2006-02-003681. Epub 2006 Apr 11. PMID: 16609065; PMCID: PMC1785011.
3. Gomes IM, Maia CJ, Santos CR. STEAP proteins: from structure to applications in cancer therapy. Mol Cancer Res. 2012 May;10(5):573-87. doi: 10.1158/1541-7786.MCR-11-0281. Epub 2012 Apr 20. PMID: 22522456.

PRODUCT SPECIFIC NOTICES

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