

# B7-H3 (F-11): sc-376769

## BACKGROUND

T cell activation and immune function are regulated by the innate immune system through positive and negative costimulatory molecules. One such molecule, B7-H3 (B7-homolog 3, also designated B7RP-2) belongs to the B7 immunoglobulin superfamily. Soluble B7-H3 binds a putative receptor on activated T-cells that is distinct from CD28, CTLA-4, ICOS and PD-1. Widely expressed on nonlymphoid tissues, B7-H3 costimulates proliferation of both CD4<sup>+</sup> and CD8<sup>+</sup> T cells. The ability of B7-H3 to stimulate Th1 and cytotoxic-T cell responses suggest that it may have antitumor activity. B7-H3 interactions may play a role in regulating cell-mediated immune responses against cancer, implicating B7-H3 as a potential therapeutic tool.

## CHROMOSOMAL LOCATION

Genetic locus: CD276 (human) mapping to 15q24.1; Cd276 (mouse) mapping to 9 B.

## SOURCE

B7-H3 (F-11) is a mouse monoclonal antibody raised against amino acids 166-465 mapping within an N-terminal extracellular domain of B7-H3 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

B7-H3 (F-11) is available conjugated to agarose (sc-376769 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376769 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376769 PE), fluorescein (sc-376769 FITC), Alexa Fluor® 488 (sc-376769 AF488), Alexa Fluor® 546 (sc-376769 AF546), Alexa Fluor® 594 (sc-376769 AF594) or Alexa Fluor® 647 (sc-376769 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376769 AF680) or Alexa Fluor® 790 (sc-376769 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

## APPLICATIONS

B7-H3 (F-11) is recommended for detection of B7-H3 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for B7-H3 siRNA (h): sc-45444, B7-H3 siRNA (m): sc-45445, B7-H3 shRNA Plasmid (h): sc-45444-SH, B7-H3 shRNA Plasmid (m): sc-45445-SH, B7-H3 shRNA (h) Lentiviral Particles: sc-45444-V and B7-H3 shRNA (m) Lentiviral Particles: sc-45445-V.

Molecular Weight of B7-H3 isoforms: 57/34/53/57 kDa.

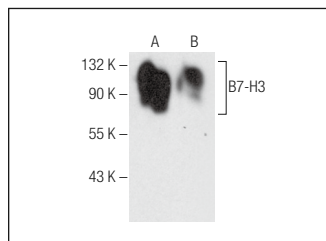
Molecular Weight of glycosylated B7-H3: 90-110 kDa.

Positive Controls: JAR cell lysate: sc-2276 or JEG-3 whole cell lysate: sc-364255.

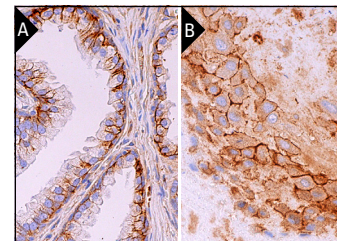
## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## DATA



B7-H3 (F-11): sc-376769. Western blot analysis of B7-H3 expression in JAR (A) and JEG-3 (B) whole cell lysates.



B7-H3 (F-11): sc-376769. Immunoperoxidase staining of formalin fixed, paraffin-embedded human prostate tissue showing membrane staining of glandular cells (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing membrane staining of decidual cells (B).

## SELECT PRODUCT CITATIONS

1. Liu, F., et al. 2015. B7-H3 promotes cell migration and invasion through the Jak2/Stat3/MMP9 signaling pathway in colorectal cancer. *Mol. Med. Rep.* 12: 5455-5460.
2. Jiang, B., et al. 2016. B7-H3 increases thymidylate synthase expression via the PI3k-Akt pathway. *Tumour Biol.* 37: 9465-9472.
3. Suo, D., et al. 2020. PM2.5 induces apoptosis, oxidative stress injury and melanin metabolic disorder in human melanocytes. *Exp. Ther. Med.* 19: 3227-3238.
4. Huang, Y., et al. 2021. FUT8-mediated aberrant N-glycosylation of B7-H3 suppresses the immune response in triple-negative breast cancer. *Nat. Commun.* 12: 2672.
5. Lee, J.H., et al. 2023. B7-H3 expression is associated with high PD-L1 expression in clear cell renal cell carcinoma and predicts poor prognosis. *Diagn. Pathol.* 18: 36.
6. Wang, M., et al. 2023. FDW028, a novel FUT8 inhibitor, impels lysosomal proteolysis of B7-H3 via chaperone-mediated autophagy pathway and exhibits potent efficacy against metastatic colorectal cancer. *Cell Death Dis.* 14: 495.
7. Bartolomé, R.A., et al. 2023. Schnurri-3 drives tumor growth and invasion in cancer cells expressing interleukin-13 receptor  $\alpha 2$ . *Cell Death Dis.* 14: 742.
8. Wu, R., et al. 2023. Exosomal B7-H3 facilitates colorectal cancer angiogenesis and metastasis through AKT1/mTOR/VEGFA pathway. *Cell. Signal.* 109: 110737.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

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