

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⁺ and CD8⁺ 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_{2a} 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.

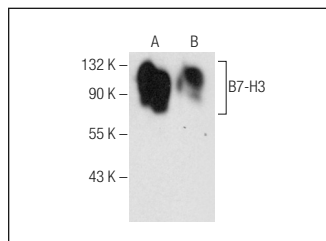
Molecular Weight of glycosylated B7-H3: 90-110 kDa.

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

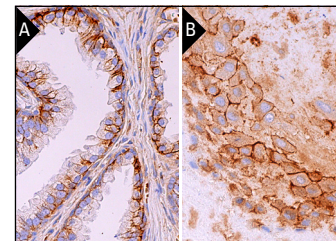
STORAGE

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

- 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.
- Jiang, B., et al. 2016. B7-H3 increases thymidylate synthase expression via the PI3k-Akt pathway. *Tumour Biol.* 37: 9465-9472.
- 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.
- 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.
- Lei, X., et al. 2021. A pan-histone deacetylase inhibitor enhances the antitumor activity of B7-H3-specific CAR T cells in solid tumors. *Clin. Cancer Res.* 27: 3757-3771.
- Meng, F., et al. 2021. Concomitant inhibition of B7-H3 and PD-L1 expression by a novel and synthetic microRNA delivers potent antitumor activities in colorectal tumor models. *Invest. New Drugs* 39: 1267-1274.
- Meng, F., et al. 2021. miR-34a induces immunosuppression in colorectal carcinoma through modulating a SIRT1/NFκB/B7-H3/TNF-α axis. *Cancer Immunol. Immunother.* 70: 2247-2259.
- 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.

RESEARCH USE

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

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