SANTA CRUZ BIOTECHNOLOGY, INC.

IDO (H-11): sc-137012

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Indoleamine 2,3-dioxygenase (IDO) is an IFN-γ inducible enzyme that catalyzes the degradation of the essential amino acid L-tryptophan to N-formylkynurenine. The gene encoding human IDO maps to chromosome 8p11.21. IDO, also known as INDO, is an important modulator of immunological responses and protects allogeneic concepti from alloreactive maternal lymphocytes. IDO mediates an interesting inhibitory effect of HeLa cells co-cultured with human PBLs. The ILN-2-induced proliferation response of PBLs is diminished in the presence of HeLa cells while an IDO inhbitor negates this effect. Flow cytometric analysis indicates both mature and immature CD123-positive dentritic cells suppress T cell activity using IDO. IDO-transfected cells co-cultured with T cells reduces T cell proliferation. Additionally, adopted transfer of donor T cells reduces donor T cell numbers in IDO-transgenic mice. The pharmacological or genetic manipulation of IDO may be useful for supressing undesirable T cell response.

CHROMOSOMAL LOCATION

Genetic locus: IDO1 (human) mapping to 8p11.21; Ido1 (mouse) mapping to 8 A2.

SOURCE

IDO (H-11) is a mouse monoclonal antibody raised against amino acids 1-80 of IDO of mouse origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

IDO (H-11) is available conjugated to agarose (sc-137012 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-137012 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-137012 PE), fluorescein (sc-137012 FITC), Alexa Fluor® 488 (sc-137012 AF488), Alexa Fluor® 546 (sc-137012 AF546), Alexa Fluor® 594 (sc-137012 AF594) or Alexa Fluor® 647 (sc-137012 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-137012 AF680) or Alexa Fluor® 790 (sc-137012 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

IDO (H-11) is recommended for detection of IDO 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 IDO siRNA (h): sc-45939, IDO siRNA (m): sc-41530, IDO shRNA Plasmid (h): sc-45939-SH, IDO shRNA Plasmid (m): sc-41530-SH, IDO shRNA (h) Lentiviral Particles: sc-45939-V and IDO shRNA (m) Lentiviral Particles: sc-41530-V.

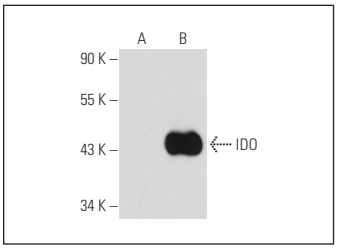
Molecular Weight of IDO: 42 kDa.

Positive Controls: IDO (m): 293T Lysate: sc-120945.

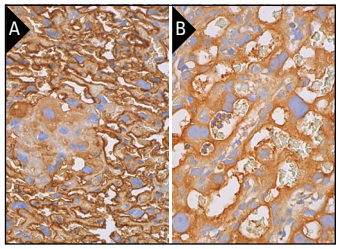
STORAGE

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

DATA



IDO (H-11): sc-137012. Western blot analysis of IDO expression in non-transfected: sc-117752 (**A**) and mouse IDO transfected: sc-120945 (**B**) 293T whole cell lysates.



IDO (H-11): sc-137012. Immunoperoxidase staining of formalin fixed, paraffin-embedded mouse placenta tissue (**A**) and rat placenta tissue (**B**) showing cytoplasmic staining of trophoblastic cells and decidual cells.

SELECT PRODUCT CITATIONS

1. Huang, S.H., et al. 2013. Epidermal growth factor receptor-containing exosomes induce tumor-specific regulatory T cells. Cancer Invest. 31: 330-335.
2. Yu, D., et al. 2015. The IDO inhibitor coptisine ameliorates cognitive impairment in a mouse model of Alzheimer's disease. J. Alzheimers Dis. 43: 291-302.
3. Shaw, E.J., et al. 2017. Intestinal epithelial suppressor of cytokine signaling 3 (SOCS3) impacts on mucosal homeostasis in a model of chronic inflammation. Immun. Inflamm. Dis. 5: 336-345.
4. Xu, G., et al. 2018. A highly potent and selective inhibitor Roxyl-WL targeting IDO1 promotes immune response against melanoma. J. Enzyme Inhib. Med. Chem. 33: 1089-1094.
5. Pasztorek, M., et al. 2019. Influence of platelet lysate on 2D and 3D amniotic mesenchymal stem cell cultures. Front. Bioeng. Biotechnol. 7: 338.
6. da Silva, T.P., et al. 2020. Macrophage polarization in leprosy-HIV co-infected patients. Front. Immunol. 11: 1493.
7. Zegallai, H.M., et al. 2021. Tafazzin deficiency in mouse mesenchymal stem cells potentiates their immunosuppression and impairs activated B lymphocyte immune function. bioRxiv. E-published.
8. Zegallai, H.M., et al. 2022. Tafazzin deficiency in mouse mesenchymal stem cells promote reprogramming of activated B lymphocytes toward immunosuppressive phenotypes. FASEB J. 36: e22443.

RESEARCH USE

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