SANTA CRUZ BIOTECHNOLOGY, INC.

IDO (mIDO-48): sc-53978

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 me-diates 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 immautre 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 (mIDO-48) is a rat monoclonal antibody raised against recombinant full length IDO of mouse origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

IDO (mIDO-48) is available conjugated to agarose (sc-53978 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-53978 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-53978 PE), fluorescein (sc-53978 FITC), Alexa Fluor® 488 (sc-53978 AF488), Alexa Fluor® 546 (sc-53978 AF546), Alexa Fluor® 594 (sc-53978 AF594) or Alexa Fluor® 647 (sc-53978 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-53978 AF680) or Alexa Fluor® 790 (sc-53978 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

IDO (mIDO-48) is recommended for detection of IDO of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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.

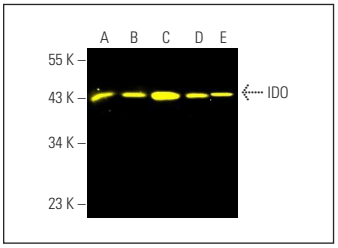
Molecular Weight of IDO: 42 kDa.

Positive Controls: Neuro-2A whole cell lysate: sc-364185.

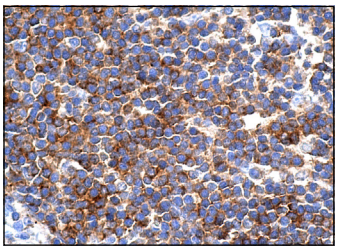
STORAGE

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

DATA



IDO (mIDO-48) Alexa Fluor® 488: sc-53978 AF488. Direct fluorescent western blot analysis of IDO expression in Neuro-2A (**A**), MOLT-4 (**B**), L6 (**C**), A549 (**D**) and HeLa (**E**) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214.



IDO (mIDO-48): sc-53978. Immunoperoxidase staining of formalin fixed, paraffin-embedded human lymph node tissue showing cytoplasmic staining of non-germinal center cells.

SELECT PRODUCT CITATIONS

1. Dobos, N., et al. 2012. The role of indoleamine 2,3-dioxygenase in a mouse model of neuroinflammation-induced depression. J. Alzheimers Dis. 28: 905-915.
2. Chen, D.Y., et al. 2013. Dextromethorphan inhibits activations and functions in dendritic cells. Clin. Dev. Immunol. 2013: 125643.
3. Ryan, M., et al. 2014. FoxP3 and indoleamine 2,3-dioxygenase immunoreactivity in sentinel nodes from melanoma patients. Am. J. Otolaryngol. 35: 689-694.
4. Masaki, A., et al. 2015. Prognostic significance of tryptophan catabolism in adult T-cell leukemia/lymphoma. Clin. Cancer Res. 21: 2830-2839.
5. 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.
6. Spinelli, P., et al. 2018. Identification of the novel IDO1 imprinted locus and its potential epigenetic role in pregnancy loss. Hum. Mol. Genet. 28: 662-674.
7. Ahmadzada, T., et al. 2019. High BIN1 expression has a favorable prognosis in malignant pleural mesothelioma and is associated with tumor infiltrating lymphocytes. Lung Cancer 130: 35-41.
8. Chu, C.L., et al. 2020. Tyrosine kinase inhibitors modulate dendritic cell activity via confining c-Kit signaling and tryptophan metabolism. Int. Immunopharmacol. 82: 106357.
9. DeVito, N.C., et al. 2021. Pharmacological Wnt ligand inhibition overcomes key tumor-mediated resistance pathways to anti-PD-1 immunotherapy. Cell Rep. 35: 109071.

RESEARCH USE

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