SANTA CRUZ BIOTECHNOLOGY, INC.

IDO (h): 293T Lysate: sc-114136

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. 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 that 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 suppressing undesirable T cell response.

REFERENCES

1. Dai, W. and Gupta, S.L. 1990. Molecular cloning, sequencing and expression of human interferon-γ-inducible indoleamine 2,3-dioxygenase cDNA. Biochem. Biophys. Res. Commun. 168: 1-8.
2. Najfeld, V., Menninger, J., Muhleman, D., Comings, D.E. and Gupta, S.L. 1993. Localization of indoleamine 2,3-dioxygenase gene (INDO) to chromosome 8p12→p11 by fluorescent *in situ* hybridization. Cytogenet. Cell Genet. 64: 231-232.
3. Munn, D.H., Zhou, M., Attwood, J.T., Bondarev, I., Conway, S.J., Marshall, B., Brown, C. and Mellor, A.L. 1998. Prevention of allogeneic fetal rejection by tryptophan catabolism. Science 281: 1191-1193.
4. Logan, G.J., Smyth, C.M., Earl, J.W., Zaikina, I., Rowe, P.B., Smythe, J.A. and Alexander, I.E. 2002. HeLa cells co-cultured with peripheral blood lymphocytes acquire an immuno-inhibitory phenotype through upregulation of indoleamine 2,3-dioxygenase activity. Immunology 105: 478-487.
5. Mellor, A.L., Keskin, D.B., Johnson, T., Chandler, P. and Munn, D.H. 2002. Cells expressing indoleamine 2,3-dioxygenase inhibit T cell responses. J. Immunol. 168: 3771-3776.

CHROMOSOMAL LOCATION

Genetic locus: IDO1 (human) mapping to 8p11.21.

PRODUCT

IDO (h): 293T Lysate represents a lysate of human IDO transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

APPLICATIONS

IDO (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive IDO antibodies. Recommended use: 10-20 µl per lane.

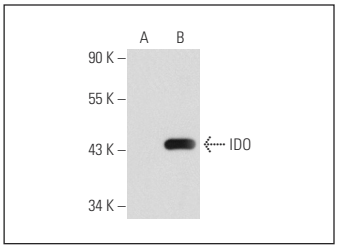
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-tranfected 293T cells.

IDO (H-11): sc-137012 is recommended as a positive control antibody for Western Blot analysis of enhanced human IDO expression in IDO transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

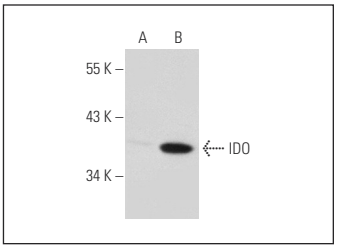
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



IDO (H-11): sc-137012. Western blot analysis of IDO expression in non-transfected: sc-117752 (**A**) and human IDO transfected: sc-114136 (**B**) 293T whole cell lysates.



IDO (mIDO-48): sc-53978. Western blot analysis of IDO expression in non-transfected: sc-117752 (**A**) and human IDO transfected: sc-114136 (**B**) 293T whole cell lysates.

RESEARCH USE

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