

IDO (E-11): sc-365517

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 inhibitor negates this effect. Flow cytometric analysis indicates both mature and immature CD123-positive Dendritic 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., et al. 1993. Localization of indoleamine 2,3-dioxygenase gene (INDO) to chromosome 8p12 \rightarrow p11 by fluorescent *in situ* hybridization. *Cytogenet. Cell Genet.* 64: 231-232.
3. Munn, D.H., et al. 1998. Prevention of allogeneic fetal rejection by tryptophan catabolism. *Science* 281: 1191-1193.
4. Logan, G.J., et al. 2002. HeLa cells cocultured with peripheral blood lymphocytes acquire an immuno-inhibitory phenotype through up-regulation of indoleamine 2,3-dioxygenase activity. *Immunology* 105: 478-487.
5. Mellor, A.L., et al. 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; Ido1 (mouse) mapping to 8 A2.

SOURCE

IDO (E-11) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 11-35 near the N-terminus of IDO of mouse origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-365517 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

IDO (E-11) 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 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (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.

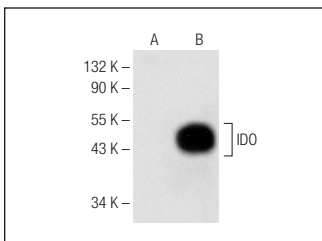
Molecular Weight of IDO: 42 kDa.

Positive Controls: IDO (m): 293T Lysate: sc-120945, HeLa whole cell lysate: sc-2200 or RAW 264.7 + IFN- γ cell lysate: sc-2259.

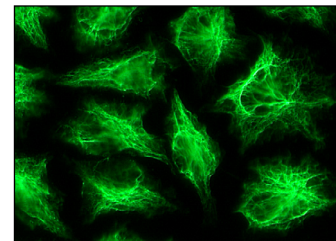
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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. 2) Immunoprecipitation: use Protein L-Agarose: sc-2336 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

DATA



IDO (E-11): sc-365517. Western blot analysis of IDO expression in non-transfected: sc-117752 (A) and mouse IDO transfected: sc-120945 (B) 293T whole cell lysates.



IDO (E-11): sc-365517. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoskeletal localization.

RESEARCH USE

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

PROTOCOLS

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



See **IDO (mIDO-48): sc-53978** for IDO antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor[®] 488, 546, 594, 647, 680 and 790.