

IDO (M-20): sc-25123

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 8p11.22. 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

- 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.
- Najfeld, V., et al. 1993. Localization of indoleamine 2,3-dioxygenase gene (INDO) to chromosome 8p12→p11 by fluorescent *in situ* hybridization. *Cytogenet. Cell Genet.* 64: 231-232.
- Munn, D.H., et al. 1998. Prevention of allogeneic fetal rejection by tryptophan catabolism. *Science* 281: 1191-1193.
- 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.
- 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* (mouse) mapping to 8 A2.

SOURCE

IDO (M-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of IDO of mouse origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-25123 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

IDO (M-20) is recommended for detection of IDO of mouse and rat 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), 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 (m): sc-41530, IDO shRNA Plasmid (m): sc-41530-SH and IDO shRNA (m) Lentiviral Particles: sc-41530-V.

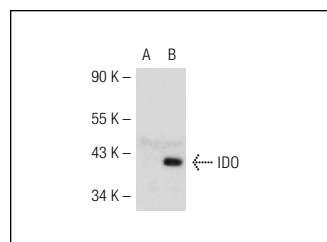
Molecular Weight of IDO: 42 kDa.

Positive Controls: IDO (m): 293T Lysate: sc-120945, RAW 264.7 + IFN- γ cell lysate: sc-2259 or mouse placenta extract: sc-364247.

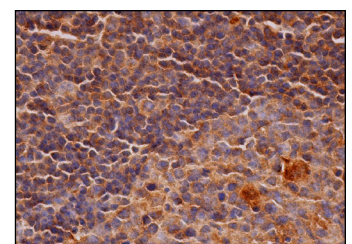
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



IDO (M-20): sc-25123. Western blot analysis of IDO expression in non-transfected: sc-117752 (A) and mouse IDO transfected: sc-120945 (B) 293T whole cell lysates.



IDO (M-20): sc-25123. Immunoperoxidase staining of formalin fixed, paraffin-embedded human lymph node tissue showing cytoplasmic staining of cells in germinal and non-germinal centers.

RESEARCH USE

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


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Try **IDO (mIDO-48): sc-53978** or **IDO (E-11): sc-365517**, our highly recommended monoclonal alternatives to IDO (M-20). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **IDO (mIDO-48): sc-53978**.