# CERTIFICATE OF ANALYSIS – TECHNICAL DATA SHEET

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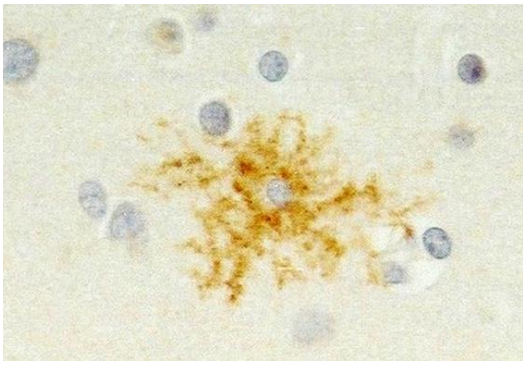
| **Product name** | IDO-1, Rat, pAb | | |
| **Catalog number** | HP8036 | | |
| **Lot number** | - | **Expiry date** | - |
| **Volume** | 1 ml | **Amount** | 100 µg |
| **Formulation** | 0.2 µm filtered in PBS+0.1%BSA+0.02%NaN3 | **Concentration** | 100 µg/ml |
| **Host Species** | Rabbit IgG | **Conjugate** | None |
| **Endotoxin** | N.A. | **Purification** | Protein A |
| **Storage** | 4°C | | |

## Application notes

| | IHC-F | IHC-P | IF | FC | FS | IA | IP | W |
|---|---|---|---|---|---|---|---|---|
| Reference # | | | | | | | | |
| Yes | • | • | | | | | | • |
| No | | | | | | | | |
| N.D. | | | • | • | • | • | • | |

*N.D.= Not Determined; IHC = Immuno histochemistry; F = Frozen sections; P = Paraffin sections; IF = Immuno Fluorescence; FC = Flow Cytometry; FS = Functional Studies; IA = Immuno Assays; IP = Immuno Precipitation; W = Western blot*



IHC: Block of the endogenous peroxidase is necessary to avoid unspecific background staining. As pretreatment, Heat inducing epitope retrieval is used.

Dilutions to be used depend on detection system applied. It is recommended that users test the reagent and determine their own optimal dilutions. The typical starting working dilution is 1:50.

- IHC-P: Epitopes are unmasked by heating at 60°C in 10 mM sodium citrate, pH6.0, for 60 minutes.
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## General Information

**Description**

The polyclonal antibody recognizes rat indoleamine 2,3-dioxygenase 1 (IDO1 or INDO). IDO1 is an intracellular heme-containing enzyme of 45 kD that catalyzes the oxidative cleavage of the indole ring of several important regulatory molecules, like tryptophan, serotonin and melatonin. By doing this, IDO1 initiates the production of biologically active metabolites, commonly referred to as kynurenines. IDO1 is widely expressed in a variety of human tissues as well as in macrophages and dendritic cells (DCs). In inflammation, interferons (IFNs) act on specific receptors to trigger IDO1 induction. The production of IFN-gamma and induction of IDO1 represent important antimicrobial mechanisms. Degradation and depletion of tryptophan by IDO1 inhibits the growth of viruses, bacteria and parasites. Furthermore, IDO1 plays a complex and crucial role in immunoregulation during infection, pregnancy, autoimmunity, transplantation, and neoplasia. By local depletion of tryptophan and increasing proapoptotic kynurenines, IDO1 greatly affects T-cell proliferation and survival, both in vitro and in vivo, and also affects B-cell and NK-cell function and survival. There is a central role for IDO1 expression in tolerance involving regulatory cells and DCs. IDO1 acts as an intermediate pathway in LPS-induced production of reactive oxygen species and NF-kappaB activation, two processes that lead to DC maturation. In addition to classic IDO (IDO1) indoleamine 2,3-dioxygenase-2, indoleamine 2,3-dioxygenase-like protein or proto-indoleamine 2,3 dioxygenase (IDO2, IDO-2, INDOL1 or proto-IDO) has been described.

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| **Immunogen** | A mixture of three rat IDO peptides: MPHSQISPAEGSRRILEEY (1-19), LFSFPGGDCDKGFFLVSLMVE (155-176), and VKPSKQKPMGGHKSEEPS (359-376) coupled to keyhole limpet hemocyanin. |
| **Aliases** | Indoleamine-pyrrole 2,3 dioxygenase |
| **Gene** | Gene name: Ido1 |
| **Cross reactivity** | IDO2: No; Mouse IDO1: No |
| **References** | 1. Hill, M et al; Heme oxygenase-1 inhibits rat and human breast cancer cell proliferation: mutual cross inhibition with indoleamine 2,3-dioxygenase. FASEB J 2005, 19: 1957 |
| **Storage&stability** | Product should be stored at 4°C. Under recommended storage conditions, product is stable for at least one year. |
| **Precautions** | For research use only. Not for use in or on humans or animals or for diagnostics. It is the responsibility of the user to comply with all local/state and federal rules in the use of this product. Hycult Biotech is not responsible for any patent infringements that might result from the use or derivation of this product. |

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We hereby certify that the above-stated information is correct and that this product has been successfully tested by the Quality Control Department. This product was released for sale according to the existing specifications. This document has been produced electronically and is valid without a signature.

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| Approved by Manager of QC | Date |
| Robbert Zwinkels | 13/03/2018 |

Do you have any questions or comments regarding this product? Please contact us via support@hycultbiotech.com.