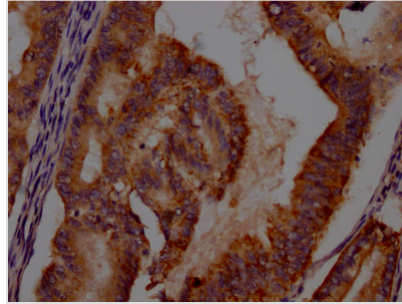




IDO1 Recombinant Monoclonal Antibody

Product Code	CSB-RA215054A0HU
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	P14902
Immunogen	A synthesized peptide derived from human INDO
Species Reactivity	Human
Tested Applications	ELISA, IHC; Recommended dilution: IHC:1:50-1:200
Relevance	Catalyzes the first and rate limiting step of the catabolism of the essential amino acid tryptophan along the kynurenine pathway (PubMed:17671174). Involved in the peripheral immune tolerance, contributing to maintain homeostasis by preventing autoimmunity or immunopathology that would result from uncontrolled and overreacting immune responses (PubMed:25691885). Tryptophan shortage inhibits T lymphocytes division and accumulation of tryptophan catabolites induces T-cell apoptosis and differentiation of regulatory T-cells (PubMed:25691885). Acts as a suppressor of anti-tumor immunity (PubMed:23103127, PubMed:25157255, PubMed:14502282, PubMed:25691885). Limits the growth of intracellular pathogens by depriving tryptophan (PubMed:25691885). Protects the fetus from maternal immune rejection (PubMed:25691885).
Form	Liquid
Conjugate	Non-conjugated
Storage Buffer	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Purification Method	Affinity-chromatography
Isotype	Rabbit IgG
Clonality	Monoclonal
Product Type	Recombinant Antibody
Immunogen Species	Homo sapiens (Human)
Research Area	Cancer; Cardiovascular; Metabolism; Signal transduction
Gene Names	IDO1
Clone No.	9E5
Image	



IHC image of CSB-RA215054A0HU diluted at 1:100 and staining in paraffin-embedded human endometrial cancer performed on a Leica BondTM system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4? overnight. The primary is detected by a Goat anti-rabbit IgG polymer labeled by HRP and visualized using 0.05% DAB.

Description

The IDO1 recombinant monoclonal antibody is designed to detect human IDO1 protein and can be utilized in ELISA and IHC applications. The production of this antibody involves recombinant DNA technology and begins with the sequencing of the cDNA from the IDO1 antibody-producing hybridomas. The IDO1 monoclonal antibody gene is then synthesized and cloned into a vector for transfection into cells for cultivation. The hybridomas are created by fusing B cells that are extracted from an animal immunized with a synthesized peptide derived from human IDO1 with myeloma cells. Finally, the IDO1 recombinant monoclonal antibody is purified through affinity chromatography from the cell culture supernatant.

The IDO1 protein is an enzyme that catalyzes the initial and rate-limiting step of tryptophan metabolism along the kynurenine pathway. In cells, IDO1 is primarily expressed in immune cells, such as dendritic cells, macrophages, and some tumor cells. Its main function is to regulate immune responses, specifically by limiting T-cell activation and promoting regulatory T-cell differentiation. The production of kynurenine from tryptophan by IDO1 has also been implicated in other cellular processes such as neuroprotection, immunotolerance, and inflammation. Dysfunction of IDO1 has been associated with various diseases, including cancer, autoimmunity, and neurodegeneration.