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# TGIF; IL-10A

Catalog # PVGS1197

## Product Information

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| **Primary Accession** | P29456 |
| **Species** | Rat |
| **Sequence** | MSKGHSIKGD NNCTHFPVSQ THMLRELRAA FSQVKTFFQK KDQLDNIVLT DSLLQDFKGY LGCQALSEMI KFYLVEVMPQ AENHGPEIKE HLNSLGEKLK TLWIQLRRCH RFLPCENKSK AVEQVKNDFN KLQDKGVYKA MNEFDIFINC IEAYVTLKMK N |
| **Purity** | > 95% by SDS-PAGE and HPLC analyses. |
| **Endotoxin Level** | |
| **Formulation** | Lyophilized after extensive dialysis against PBS. |
| **Reconstitution** | Reconstituted in dd$H_2O$ at 100 g/ml. |

## Additional Information

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| **Gene ID** | 25325 |
| **Other Names** | Interleukin-10, IL-10, Cytokine synthesis inhibitory factor, CSIF, Il10, Il-10 |
| **Target Background** | Interleukin-10 (IL-10), also known as cytokine synthesis inhibitory factor (CSIF), is an anti-inflammatory cytokine produced by a variety of cell lines including T-cells, macrophages and mast cells. IL-10 is classified as a class-2 cytokine, a set of cytokines including IL-19, IL-20, IL-22, IL-24, and IL-26. IL-10 can inhibit the synthesis of pro-inflammatory cytokines such as IFN-gamma, IL-2, IL-3, TNF and GM-CSF. It also stimulates Th2 responses, but suppresses the antigen-presentation capacity of antigen presenting cells.<br><br>Recombinant rat Interleukin-10 (IL-10)produced in E. coli is a single non-glycosylated polypeptide chain containing 161 amino acids. A fully biologically active molecule, recombinant rat Interleukin-10 (IL-10) has a molecular mass of 18.7kDa analyzed by reducing SDS-PAGE and is obtained by proprietary chromatographic techniques at . |

## Protein Information

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| **Name** | Il10 |
| **Synonyms** | Il-10 |
| **Function** | Major immune regulatory cytokine that acts on many cells of the immune system where it has profound anti-inflammatory functions, limiting excessive |

tissue disruption caused by inflammation. Mechanistically, IL10 binds to its heterotetrameric receptor comprising IL10RA and IL10RB leading to JAK1 and STAT2-mediated phosphorylation of STAT3. In turn, STAT3 translocates to the nucleus where it drives expression of anti-inflammatory mediators. Targets antigen-presenting cells (APCs) such as macrophages and monocytes and inhibits their release of pro-inflammatory cytokines including granulocyte-macrophage colony-stimulating factor /GM-CSF, granulocyte colony-stimulating factor/G-CSF, IL-1 alpha, IL-1 beta, IL-6, IL-8 and TNF. Also interferes with antigen presentation by reducing the expression of MHC- class II and co-stimulatory molecules, thereby inhibiting their ability to induce T cell activation (By similarity). In addition, controls the inflammatory response of macrophages by reprogramming essential metabolic pathways including mTOR signaling (By similarity).

**Cellular Location** Secreted {ECO:0000250|UniProtKB:P22301}.