AdipoGen®
LIFE SCIENCES

www.adipogen.com

Advanced
Immune-Regulation Reagents

Highly Active hIDO1 *For Enzymatic Assays & Inhibitor Screenings*

IDO1 (human) (rec.) (His) (highly active)

AG-40B-0161 — 50 µg

Specific Activity: >100'000U/mg protein with L-tryptophan as substrate (activity assay with catalase). One unit is defined as the amount of enzyme that produces 1nmol of N-formylkynurenine (NFK) per hour.

Potent Triazole IDO1 Inhibitor: MMG-0358

AG-CR1-3630 — 1 mg | 5 mg

Shows IC_{50} values of 2nM in a cellular assay on mIDO1, 80nM in a cellular assay on hIDO1, 330nM in an enzymatic assay on hIDO1 at pH 6.5, and 71nM in an enzymatic assay on hIDO1 at pH 7.4. Active *in vivo*.

LIT: Rational design of 4-aryl-1,2,3-triazoles for indoleamine 2,3-dioxygenase 1 inhibition: U.F. Roehrig, et al.; J. Med. Chem. **55,** 5270 (2012)

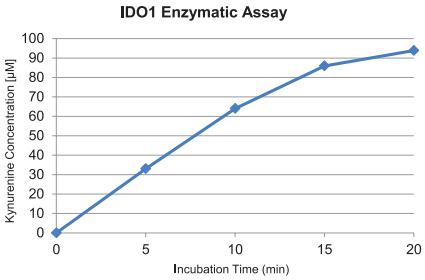


FIGURE: Enzymatic activity assay of IDO (human) (rec.) (His) (highly active) (Prod. No. AG-40B-0161).

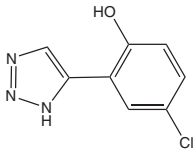


FIGURE: Chemical Structure of MMG-0358 (Prod. No. AG-CR1-3630).

NEW IDO1 (human) Enzyme + Inhibitor Set

AG-44B-0006 — 1 Set

Includes 1x50 µg of Prod. No. AG-40B-0161 and 1x100 µg Prod. No. AG-CR1-3630.

NEW

NEWLY INTRODUCED Immune Checkpoint Proteins

TIGIT (human):Fc (human) (rec.)
AG-40B-0162 — 50 µg

VISTA [B7-H5] (human):Fc (human) (rec.)
AG-40B-0163 — 50 µg

VISTA [B7-H5] (mouse):Fc (human) (rec.)
AG-40B-0164 — 50 µg

B7-H5 [VISTA] (human) (rec.) (His)
CHI-HF-201B7H5 — 50 µg

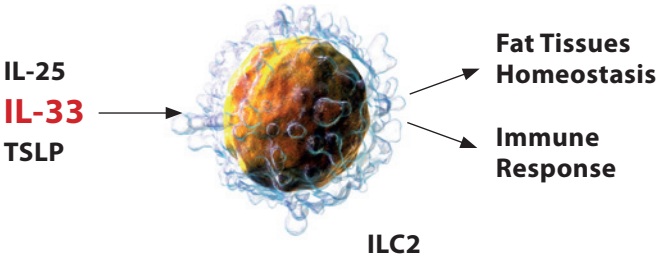
B7-H5 [VISTA] (human):Fc (mouse) (rec.)
CHI-HF-211B7H5 — 100 µg

Visit www.adipogen.com for a Complete Panel of Immune Checkpoint Proteins!

Interleukin-33 & Innate Lymphocyte 2 [ILC2]

IL-33 is abundantly expressed by adipose tissue stroma, predominantly endothelial cells and fibroblast-like reticular cells. Although upon infection and allergy, IL-33 is classified as a pro-inflammatory mediator, under non-inflammatory conditions, IL-33 sustains Tregs, eosinophils as well as ILC2 to keep an anti-inflammatory state in adipose tissue. IL-33 is also involved in the formation of beige adipocytes from adipocyte precursors by a mechanism involving IL-13 and the endogenous opioid Met-Enkephalin secreted by activating ILC2s.

LIT: Activated type 2 innate lymphoid cells regulate beige fat biogenesis: M.W. Lee, et al.; Cell **160,** 74 (2015)



UNIQUE

Potent Functional Antibody – Adipocyte Differentiation Inducer

IL-33 (mouse), mAb (rec.) (blocking) (Bondy-1-1) (preservative free)

AG-27B-0013PF — 100 µg | 500 µg | 1 mg

LIT: Regulation of de novo adipocyte differentiation through crosstalk between adipocytes and pre-adipocytes: T.D. Challa, et al.; Diabetes **64,** 4075 (2015)

UNIQUE

NEW Highly Active Protein

IL-33 (oxidation resistant) (human) (rec.) (untagged)

AG-40B-0160 — 10 µg | 100 µg

LIT: Oxidation of the alarmin IL-33 regulates ST2-dependent inflammation: E.S. Cohen, et al.; Nat. Commun. **6,** ID8327 (2015)

Also available: **Human IL-33 & IL-37 ELISA Kits | Human IL-36 & IL-38 Matched Pair Detection Sets**

Highly Active IL-1 Superfamily Proteins

IL-36α (IL-1F6), IL-36β (IL-1F8) and IL-36γ (IL-1F9) bind to IL-36R (IL-1Rrp2) and IL-1RAcP, activating similar intracellular signals as IL-1 and are inhibited by IL-36Ra. IL-36 family members induce the production of pro-inflammatory cytokines targeting skin and dendritic cells leading to a Th1 response. IL-36 members have key roles in psoriasis and in the pathogenesis of intestinal inflammation.

LIT: Interleukin-36 (IL-36) ligands require processing for full agonist (IL-36α, IL-36β, and IL-36γ) or antagonist (IL-36Ra) activity: J.E. Towne, et al.; J. Biol. Chem. **286,** 42594 (2011)

IL-36α (aa 6-158) (human) (rec.) (untagged)
AG-40B-0165 — 10 µg | 3 x 10 µg

IL-36α (aa 8-160) (mouse) (rec.) (untagged)
AG-40B-0098 — 10 µg

IL-36β (aa 5-157) (human) (rec.) (untagged)
AG-40B-0117 — 10 µg

IL-36β (aa 31-183) (mouse) (rec.) (untagged)
AG-40B-0099 — 10 µg

IL-36γ (aa 18-169) (human) (rec.) (untagged)
AG-40B-0166 — 10 µg | 3 x 10 µg

IL-36γ (aa 13-164) (mouse) (rec.) (untagged)
AG-40B-0100 — 10 µg

IL-36Ra (aa 2-155) (human) (rec.) (untagged)
AG-40B-0097 — 10 µg | 3 x 10 µg

IL-36Ra (aa 3-156) (mouse) (rec.) (untagged)
AG-40B-0096 — 10 µg | 3 x 10 µg

AdipoGen® LIFE SCIENCES

APPLICATIONS: FACS: Flow Cytometry; **FUNC:** Functional Application; **ICC:** Immunocytochemistry; **IHC:** Immunohistochemistry **IP:** Immunoprecipitation; **WB:** Western blot

FORMULATION: PF = Preservative free

Unique BAFF & APRIL Reagents for Autoimmune Research

BAFF, Soluble (human) (60-mer) (rec.) (highly active)

AG-40B-0112 — 10 µg | 3 x 10 µg

Biological Activity: Increases B cell survival/proliferation. Increases CD21/CD23 expression on B cells *in vivo*. **Activates BAFF-R, TACI and BCMA receptors.** Works at concentrations <20ng/ml.

LIT: Mutation of the BAFF furin cleavage site impairs B-cell homeostasis and antibody responses: C. Bossen, et al.; Eur. J. Immunol. **41,** 787 (2011)

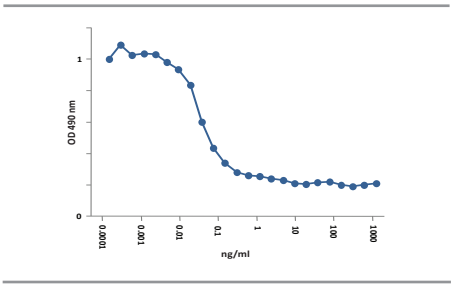


FIGURE: BAFF, Soluble (human) (60-mer) (Prod. No. AG-40B-0112) binds and activates BCMA receptor.

BULK anti-BAFF (mouse), mAb (blocking) (Sandy-2)

AG-20B-0063		100 µg
AG-20B-0063PF	Preservative Free	100 µg | 500 µg

Functional Application: **Depletion of B cells *in vivo*.** Inhibition of mouse BAFF binding to BAFF-R and TACI (BCMA not tested); blocks BAFF activity in mice.

LIT: The B cell-stimulatory cytokines BLyS and APRIL are elevated in human periodontitis and are required for B cell-dependent bone loss in experimental murine periodontitis: T. Abe, et al.; J. Immunol. **195,** 1427 (2015)

BULK anti-APRIL (mouse), mAb (rec.) (blocking) (Apry-1-1)

AG-27B-0001		100 µg
AG-27B-0001PF	Preservative Free	100 µg
AG-27B-0001B	Biotin	100 µg

Functional Application: **Depletion of plasma cells.** Inhibits binding of mouse APRIL to mouse BCMA and TACI.

LIT: Production of the plasma-cell survival factor APRIL peaks in myeloid precursor cells from human bone marrow: T. Matthes, et al.; Blood **118,** 1838 (2011)

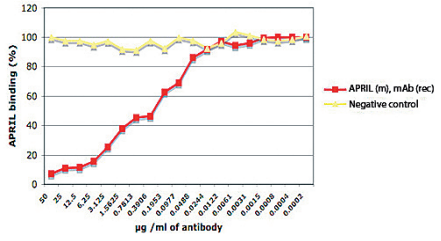


FIGURE: Binding of APRIL (mouse) to BCMA is inhibited by anti-APRIL (mouse), mAb (rec.) (blocking) (APRY-1-1) (Prod. No. AG-27B-0001).

Also available: **BAFF, Soluble (human) ELISA Kit (hypersensitive)** Prod. No. AG-45B-0001

Notch & Immune Response

Notch signaling in the immune system has been shown to be important for the differentiation of lymphoid T and B cell lineages, T cell activation, regulatory T cell function and T helper cell differentiation. Recent findings elucidate a key role for Notch signaling in differentiation, activation and function of myeloid cells such as macrophages and innate lymphoid cells (ILCs). Notch family members are involved in a variety of inflammatory conditions and autoimmune diseases.

BULK

Biologically Active Notch Proteins

DLL1 (human):Fc (human) (rec.)
AG-40A-0116Y — 10 µg | 50 µg

DLL1 (mouse):Fc (human) (rec.)
AG-40A-0148 — 10 µg | 50 µg

DLL4 (human):Fc (human) (rec.)
AG-40A-0077Y — 10 µg | 50 µg

DLL4 (mouse):Fc (human) (rec.)
AG-40A-0145 — 10 µg | 50 µg

DNER (extracellular domain) (human) (rec.)
AG-40A-0137Y — 10 µg | 50 µg

DNER (extracellular domain) (mouse):Fc (human) (rec.)
AG-40A-0177 — 10 µg | 50 µg

Jagged-1 (human):Fc (human) (rec.)
AG-40A-0081 — 10 µg | 50 µg

Jagged-1 (mouse):Fc (human) (rec.)
AG-40A-0157T — 10 µg | 50 µg

Jagged-2 (human):Fc (human) (rec.)
AG-40A-0155Y — 10 µg

Jagged-2 (mouse):Fc (human) (rec.)
AG-40A-0183 — 10 µg | 50 µg

UNIQUE

Super IL-2 to induce cytotoxic T Cells and NK Cells!

IL-2 Superkine (Fc)

AG-40B-0111 — 10 µg | 3 x 10 µg

Compared to IL-2, IL-2 Superkine does not require CD25 to be active and induces superior expansion of cytotoxic CD8⁺ T and NK cells, leading to improved antitumor responses *in vivo*. IL-2 Superkine activates only poorly T regulatory cells (Tregs), meaning less toxic effects *in vivo*.

LIT: Exploiting a natural conformational switch to engineer an interleukin-2 'superkine': AM. Levin, et al.; Nature **484,** 529 (2012)

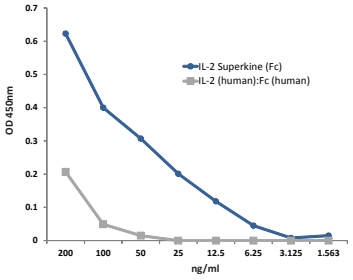


FIGURE: Binding of IL-2 Superkine (Fc) (Prod. No. AG-40B-0111) to IL-2Rβ (human) is increased 10 fold compared to IL-2 (human):Fc (human).

TNF Ligands Multimeric Proteins

Higher Activity – Lower Endotoxin

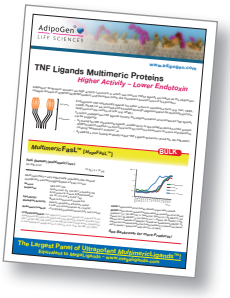
FasL (human) (multimeric) (rec.)

AG-40B-0130 — 10 µg | 3 x 10 µg

CD40L (human) (multimeric) (rec.)

AG-40B-0010 — 10 µg | 3 x 10 µg

For a Complete Overview see our TNF Ligands Multimeric Proteins Flyer!



THE STANDARDS

Potent Immunosuppressants

Cyclosporin A

AG-CN2-0079 — 100 mg | 5 x 100 mg | 1 g

Also available: **Cyclosporin C, D & H**

FTY720 . HCl

AG-CR1-3587 — 1 mg | 5 mg | 25 mg

Mycophenolic acid

AG-CN2-0419 — 100 mg | 500 mg

Rapamycin

AG-CN2-0025 — 100 µg | 1 mg | 5 mg | 25 mg

BULK

In vivo Inflammasome Inhibitor

MCC950 . sodium salt (>98%)

AG-CR1-3615 — 1 mg | 5 mg | 10 mg

BULK

The Manufacturer of iNKT Stimulators

α-Galactosylceramide (>96%)

AG-CN2-0013 — 250 µg | 1 mg

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MAY 2016