

Data Sheet

Product Name:	Benralizumab
Cat. No.:	CS-0069892
CAS No.:	1044511-01-4
Target:	Apoptosis; Interleukin Related
Pathway:	Apoptosis; Immunology/Inflammation
Solubility:	10 mM in DMSO

Benralizumab

BIOLOGICAL ACTIVITY:

Benralizumab (MEDI-563) is an interleukin-5 receptor α (**IL-5R α**)-directed cytolytic monoclonal antibody that induces direct, rapid and nearly complete depletion of eosinophils via enhanced antibody-dependent cell-mediated cytotoxicity. Benralizumab can be used for severe eosinophilic asthma^[1]. IC₅₀ & Target: IL-5R α ^[1] **In Vitro:** Benralizumab (MEDI-563) binds to recombinant human and cynomolgus monkey IL-5R α extracellular domains with a dissociation constant of 11 and 42 pM, respectively^[2].

Benralizumab (1 pM-100 nM, 48 h) inhibits IL-5-induced proliferation of CTLL-2 cells transfected with recombinant human IL-5R $\alpha\beta$ with an IC₅₀ of 0.3 nM^[2].

Benralizumab binds only to the constructs containing human IL-5R α D1^[2].

Benralizumab mediates ADCC (antibody-dependent cell-mediated cytotoxicity) of human eosinophils and basophils with EC₅₀s of 0.9 pM and 0.5 pM, respectively, and mediates eosinophil apoptosis^[2]. **In Vivo:** Benralizumab (MEDI-563) (0-30 mg/kg; i.v.; once every 3 weeks for 12 weeks) reduces peripheral blood and bone marrow eosinophil^[2].

References:

[1]. Menzies-Gow A, et al. Corticosteroid tapering with benralizumab treatment for eosinophilic asthma: PONENTE Trial. ERJ Open Res. 2019 Sep 25;5(3). pii: 00009-2019.

[2]. Kolbeck R, et al. MEDI-563, a humanized anti-IL-5 receptor alpha mAb with enhanced antibody-dependent cell-mediated cytotoxicity function. J Allergy Clin Immunol. 2010 Jun;125(6):1344-1353.e2.

CAIndexNames:

Immunoglobulin G1, anti-(human interleukin 5 receptor α -chain) (human-mouse monoclonal MEDI-563 heavy chain), disulfide with human-mouse monoclonal MEDI-563 κ -chain, dimer

SMILES:

[Benralizumab]

Caution: Product has not been fully validated for medical applications. For research use only.

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