ARG83799
arigoPLEX® Human Neutrophil Activation Multiplex ELISA Kit (NE; MPO; IL6; IL8)

Package: 96 wells
Store at: 4°C, -20°C, -80°C

Summary

Product Description	ARG83799 arigoPLEX® Human Neutrophil Activation Multiplex ELISA Kit (NE; MPO; IL6; IL8) is an Enzyme Immunoassay kit for the quantification of Human Neutrophil Activation (NE; MPO; IL6; IL8) in serum, plasma and cell culture supernatants. See all Multiplex ELISA kits
Tested Reactivity	Hu
Tested Application	ELISA
Target Name	Neutrophil Activation
Conjugation	HRP
Conjugation Note	Substrate: TMB and read at 450 nm.
Sensitivity	NE: 93.75 pg/mL MPO: 125 pg/mL IL6: 15.625 pg/mL IL8: 15.625 pg/mL
Sample Type	Serum, plasma and cell culture supernatants.
Standard Range	NE: 187.5-6000 pg/mL MPO: 250-8000 pg/mL IL6: 31.25-1000 pg/mL IL8: 31.25-1000 pg/mL
Sample Volume	50 µL

Application Instructions

Assay Time	4 hours

Properties

Form	96 well
Storage instruction	Store the kit at 4°C, -20°C, -80°C. Keep microplate wells sealed in a dry bag with desiccants. Do not expose test reagents to heat, sun or strong light during storage and usage. Please refer to the product user manual for detail temperatures of the components.
Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

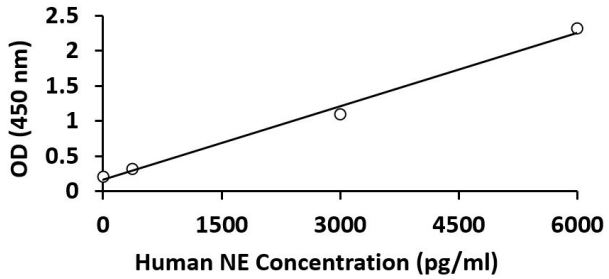
Gene Symbol	NE; MPO; IL6; IL8
Gene Full Name	Neutrophil Elastase; Myeloperoxidase; interleukin 6; interleukin 8

Background	Neutrophil Elastase: Elastases form a subfamily of serine proteases that hydrolyze many proteins in addition to elastin. Humans have six elastase genes which encode structurally similar proteins. The encoded preproprotein is proteolytically processed to generate the active protease. Following activation, this protease hydrolyzes proteins within specialized neutrophil lysosomes, called azurophil granules, as well as proteins of the extracellular matrix. The enzyme may play a role in degenerative and inflammatory diseases through proteolysis of collagen-IV and elastin. This protein also degrades the outer membrane protein A (OmpA) of E. coli as well as the virulence factors of such bacteria as Shigella, Salmonella and Yersinia. Mutations in this gene are associated with cyclic neutropenia and severe congenital neutropenia (SCN). This gene is present in a gene cluster on chromosome 19. [provided by RefSeq, Jan 2016] Myeloperoxidase: Myeloperoxidase (MPO) is a heme protein synthesized during myeloid differentiation that constitutes the major component of neutrophil azurophilic granules. Produced as a single chain precursor, myeloperoxidase is subsequently cleaved into a light and heavy chain. The mature myeloperoxidase is a tetramer composed of 2 light chains and 2 heavy chains. This enzyme produces hypohalous acids central to the microbicidal activity of neutrophils. [provided by RefSeq, Nov 2014] IL6:This gene encodes a cytokine that functions in inflammation and the maturation of B cells. In addition, the encoded protein has been shown to be an endogenous pyrogen capable of inducing fever in people with autoimmune diseases or infections. The protein is primarily produced at sites of acute and chronic inflammation, where it is secreted into the serum and induces a transcriptional inflammatory response through interleukin 6 receptor, alpha. The functioning of this gene is implicated in a wide variety of inflammation-associated disease states, including suspectibility to diabetes mellitus and systemic juvenile rheumatoid arthritis. Elevated levels of the encoded protein have been found in virus infections, including COVID-19 (disease caused by SARS-CoV-2). [provided by RefSeq, Aug 2020] IL10:The protein encoded by this gene is a cytokine produced primarily by monocytes and to a lesser extent by lymphocytes. This cytokine has pleiotropic effects in immunoregulation and inflammation. It down-regulates the expression of Th1 cytokines, MHC class II Ags, and costimulatory molecules on macrophages. It also enhances B cell survival, proliferation, and antibody production. This cytokine can block NF-kappa B activity, and is involved in the regulation of the JAK-STAT signaling pathway. Knockout studies in mice suggested the function of this cytokine as an essential immunoregulator in the intestinal tract. Mutations in this gene are associated with an increased susceptibility to HIV-1 infection and rheumatoid arthritis. [provided by RefSeq, May 2020]
Function	Neutrophil Elastase: Serine protease that modifies the functions of natural killer cells, monocytes and granulocytes. Inhibits C5a-dependent neutrophil enzyme release and chemotaxis.[UniProt] Myeloperoxidase:Part of the host defense system of polymorphonuclear leukocytes. It is responsible for microbicidal activity against a wide range of organisms. In the stimulated PMN, MPO catalyzes the production of hypohalous acids, primarily hypochlorous acid in physiologic situations, and other toxic intermediates that greatly enhance PMN microbicidal activity. [UniProt] IL6:Through activation of IL6ST-YAP-NOTCH pathway, induces inflammation-induced epithelial regeneration (By similarity). [UniProt] IL10: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. [UniProt]
Highlight	Related Product: anti-NE antibody; anti-MPO antibody; anti-IL6 antibody; anti-IL8 antibody;

Images

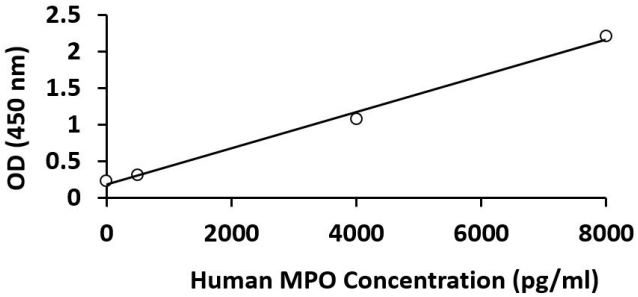
	1	2	3	4	5	6	7	8	9	10	11	12
A	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
B	MPO	MPO	MPO	MPO	MPO	MPO	MPO	MPO	MPO	MPO	MPO	MPO
C	IL6	IL6	IL6	IL6	IL6	IL6	IL6	IL6	IL6	IL6	IL6	IL6
D	IL8	IL8	IL8	IL8	IL8	IL8	IL8	IL8	IL8	IL8	IL8	IL8
E	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
F	MPO	MPO	MPO	MPO	MPO	MPO	MPO	MPO	MPO	MPO	MPO	MPO
G	IL6	IL6	IL6	IL6	IL6	IL6	IL6	IL6	IL6	IL6	IL6	IL6
H	IL8	IL8	IL8	IL8	IL8	IL8	IL8	IL8	IL8	IL8	IL8	IL8

Antibodies Coating Pattern In Microtiter Plate of ARG83799 arigoPLEX® Human Neutrophil Activation Multiplex ELISA Kit (NE; MPO; IL6; IL8)



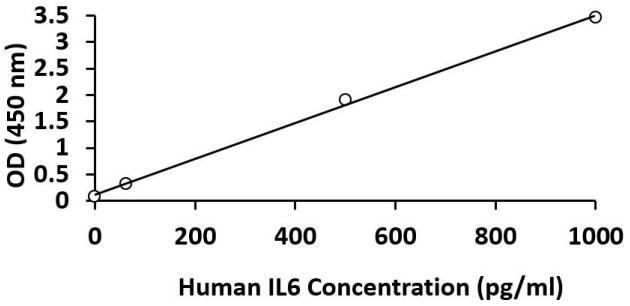
ARG83799 arigoPLEX® Human Neutrophil Activation Multiplex ELISA Kit (NE; MPO; IL6; IL8) standard curve image

ARG83799 arigoPLEX® Human Neutrophil Activation Multiplex ELISA Kit (NE; MPO; IL6; IL8) results of a typical standard for Human NE run with optical density reading at 450 nm.



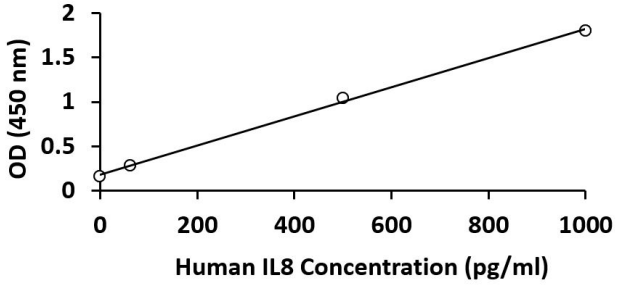
ARG83799 arigoPLEX® Human Neutrophil Activation Multiplex ELISA Kit (NE; MPO; IL6; IL8) standard curve image

ARG83799 arigoPLEX® Human Neutrophil Activation Multiplex ELISA Kit (NE; MPO; IL6; IL8) results of a typical standard for Human MPO run with optical density reading at 450 nm.



ARG83799 arigoPLEX® Human Neutrophil Activation Multiplex ELISA Kit (NE; MPO; IL6; IL8) standard curve image

ARG83799 arigoPLEX® Human Neutrophil Activation Multiplex ELISA Kit (NE; MPO; IL6; IL8) results of a typical standard for Human IL6 run with optical density reading at 450 nm.



ARG83799 arigoPLEX® Human Neutrophil Activation Multiplex ELISA Kit (NE; MPO; IL6; IL8) standard curve image

ARG83799 arigoPLEX® Human Neutrophil Activation Multiplex ELISA Kit (NE; MPO; IL6; IL8) results of a typical standard for Human IL8 run with optical density reading at 450 nm.