ARG80878
Human Neopterin ELISA Kit

Package: 96 wells
Store at: 4°C

Summary

Product Description	ARG80878 Human Neopterin ELISA Kit is an enzyme immunoassay kit for the quantification of neopterin in human serum, plasma (EDTA) and urine.
Tested Reactivity	Hu
Tested Application	ELISA
Target Name	Neopterin
Conjugation	HRP
Conjugation Note	Substrate: TMB and read at 450 nm
Sensitivity	0.7 nmol/l
Sample Type	Serum, plasma (EDTA) and urine.
Standard Range	1.35 - 111 nmol/l
Sample Volume	20 µl

Application Instructions

Assay Time	90 min (RT/shaker/dark), 10 min (RT)

Properties

Form	96 well
Storage instruction	Store the kit at 2-8°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

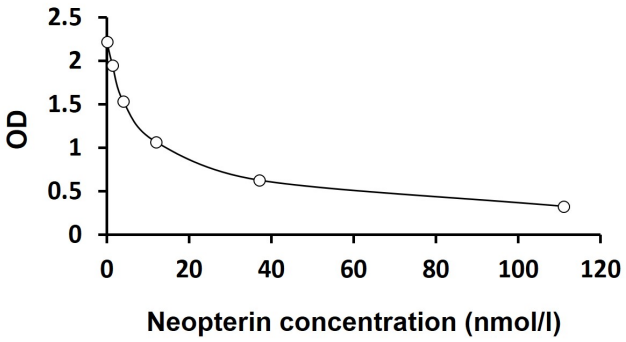
Gene Full Name	Neopterin
Background	Neopterin is a low molecular weight molecule belonging to the chemical group known as pteridines. It is synthesised by cellular immune reaction of macrophages and dendritic cells upon stimulation with the cytokine interferon-g and as a consequence released. Neopterin has a higher stability in body fluids which makes the sample handling and measurement easier compared to other cytokines. The low molecular weight, let neopterin molecules rapidly pass the intravasal area, where it is releases in urine after glomerular filtration. The half life period in human bodies is only affected by renal excretion. So neopterin values reflect the totality of immunological processes for monocytes/macrophages and dendritic cells and can be seen as a general marker of immune activity. This characteristic feature of neopterin to reflect the different interactions of immunocompetent cells is the basis for the extraordinary status of measuring neopterin in immmunological diagnosis. As a non-invasive method, urinary neopterin to creatinine ratio determination is also helpful in monitoring disease progression and the effects of therapies, as well.

Neopterin biosynthesis is closely associated with activation of the cellular immune system. Increased concentrations of neopterin were reported in patients with viral infections, suggesting that increased values may originate from the immune response of patients directed against virally infected cells. It was shown that antigenic stimulation of human peripheral blood mononuclear cells leads to neopterin release into cell culture medium and that human macrophages produce neopterin in vitro when stimulated by interferon gamma.

The determination of neopterin levels in human body fluids offers a useful and innovative tool to monitor diseases associated with the activation of cell-mediated immunity. Increasing neopterin levels in various infections precede the clinical manifestation and seroconversion. Normally samples are not tested for all possible infections. Therefore, the measurement of neopterin in blood donor samples is a useful tool in order to reduce the risk of infections via blood transfusion.

Highlight	Related products: New ELISA data calculation tool: Simplify the ELISA analysis by GainData
Research Area	Immune System kit

Images



ARG80878 Human Neopterin ELISA Kit standard curve image

ARG80878 Human Neopterin ELISA Kit results of a typical standard run with optical density reading at 450 nm.