

ARG81747 Human CSF-1R ELISA Kit

Package: 96 wells
Store at: 4°C

Component

Cat. No.	Component Name	Package	Temp
ARG81747-001	Antibody-coated microplate	8 X 12 strips	4°C. Unused strips should be sealed tightly in the air-tight pouch.
ARG81747-002	Standard	2 X 10 ng/vial	4°C
ARG81747-003	Standard/Sample diluent	30 ml (Ready to use)	4°C
ARG81747-004	Antibody conjugate concentrate (100X)	1 vial (100 µl)	4°C
ARG81747-005	Antibody diluent buffer	12 ml (Ready to use)	4°C
ARG81747-006	HRP-Streptavidin concentrate (100X)	1 vial (100 µl)	4°C
ARG81747-007	HRP-Streptavidin diluent buffer	12 ml (Ready to use)	4°C
ARG81747-008	25X Wash buffer	20 ml	4°C
ARG81747-009	TMB substrate	10 ml (Ready to use)	4°C (Protect from light)
ARG81747-010	STOP solution	10 ml (Ready to use)	4°C
ARG81747-011	Plate sealer	4 strips	Room temperature

Summary

Product Description	ARG81747 Human CSF-1R ELISA Kit is an Enzyme Immunoassay kit for the quantification of Human CSF-1R in serum, plasma (heparin, EDTA) and cell culture supernatants.
Tested Reactivity	Hu
Tested Application	ELISA
Specificity	There is no detectable cross-reactivity with other relevant proteins.
Target Name	CSF1R
Conjugation	HRP
Conjugation Note	Substrate: TMB and read at 450 nm.
Sensitivity	31.25 pg/ml
Sample Type	Serum, plasma (heparin, EDTA) and cell culture supernatants.
Standard Range	62.5 - 4000 pg/ml
Sample Volume	100 µl

Precision	Intra-Assay CV: 6.0%; Inter-Assay CV: 6.7%
Alternate Names	CSF-1 receptor; CSF-1-R; FIM2; Macrophage colony-stimulating factor 1 receptor; Proto-oncogene c-Fms; CD115; CD antigen CD115; M-CSF-R; FMS; CSFR; C-FMS; EC 2.7.10.1; CSF-1R; HDLS

Application Instructions

Assay Time	~ 5 hours
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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.

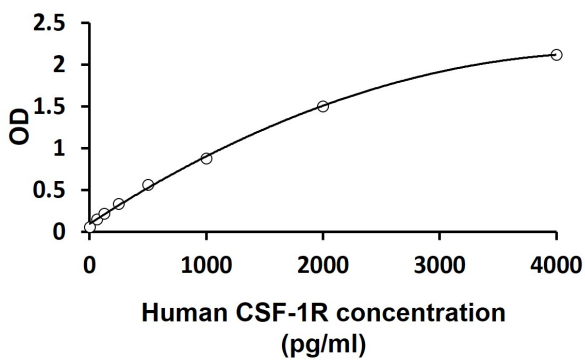
Bioinformation

Gene Symbol	CSF1R
Gene Full Name	colony stimulating factor 1 receptor
Background	The protein encoded by this gene is the receptor for colony stimulating factor 1, a cytokine which controls the production, differentiation, and function of macrophages. This receptor mediates most if not all of the biological effects of this cytokine. Ligand binding activates the receptor kinase through a process of oligomerization and transphosphorylation. The encoded protein is a tyrosine kinase transmembrane receptor and member of the CSF1/PDGF receptor family of tyrosine-protein kinases. Mutations in this gene have been associated with a predisposition to myeloid malignancy. The first intron of this gene contains a transcriptionally inactive ribosomal protein L7 processed pseudogene oriented in the opposite direction. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Dec 2013]
Function	Tyrosine-protein kinase that acts as cell-surface receptor for CSF1 and IL34 and plays an essential role in the regulation of survival, proliferation and differentiation of hematopoietic precursor cells, especially mononuclear phagocytes, such as macrophages and monocytes. Promotes the release of proinflammatory chemokines in response to IL34 and CSF1, and thereby plays an important role in innate immunity and in inflammatory processes. Plays an important role in the regulation of osteoclast proliferation and differentiation, the regulation of bone resorption, and is required for normal bone and tooth development. Required for normal male and female fertility, and for normal development of milk ducts and acinar structures in the mammary gland during pregnancy. Promotes reorganization of the actin cytoskeleton, regulates formation of membrane ruffles, cell adhesion and cell migration, and promotes cancer cell invasion. Activates several signaling pathways in response to ligand binding. Phosphorylates PIK3R1, PLCG2, GRB2, SLA2 and CBL. Activation of PLCG2 leads to the production of the cellular signaling molecules diacylglycerol and inositol 1,4,5-trisphosphate, that then lead to the activation of protein kinase C family members, especially PRKCD. Phosphorylation of PIK3R1, the regulatory subunit of phosphatidylinositol 3-kinase, leads to activation of the AKT1 signaling pathway. Activated CSF1R also mediates activation of the MAP kinases MAPK1/ERK2 and/or MAPK3/ERK1, and of the SRC family kinases SRC, FYN and YES1. Activated CSF1R transmits signals both via proteins that directly interact with phosphorylated tyrosine residues in its intracellular domain, or via adapter proteins, such as GRB2. Promotes activation of STAT family members STAT3, STAT5A and/or STAT5B. Promotes tyrosine phosphorylation of SHC1 and INPP5D/SHIP-1. Receptor signaling is down-regulated by protein phosphatases, such as INPP5D/SHIP-1, that dephosphorylate the receptor and its downstream effectors, and by rapid internalization of the activated receptor. [UniProt]
Highlight	Related products: CSF1R antibodies ; CSF1R ELISA Kits ; New ELISA data calculation tool: Simplify the ELISA analysis by GainData
PTM	Autophosphorylated in response to CSF1 or IL34 binding. Phosphorylation at Tyr-561 is important for

normal down-regulation of signaling by ubiquitination, internalization and degradation. Phosphorylation at Tyr-561 and Tyr-809 is important for interaction with SRC family members, including FYN, YES1 and SRC, and for subsequent activation of these protein kinases. Phosphorylation at Tyr-699 and Tyr-923 is important for interaction with GRB2. Phosphorylation at Tyr-723 is important for interaction with PIK3R1. Phosphorylation at Tyr-708 is important for normal receptor degradation. Phosphorylation at Tyr-723 and Tyr-809 is important for interaction with PLCG2. Phosphorylation at Tyr-969 is important for interaction with CBL. Dephosphorylation by PTPN2 negatively regulates downstream signaling and macrophage differentiation.

Ubiquitinated. Becomes rapidly polyubiquitinated after autophosphorylation, leading to its degradation. [UniProt]

Images



ARG81747 Human CSF-1R ELISA Kit standard curve image

ARG81747 Human CSF-1R ELISA Kit results of a typical standard run with optical density reading at 450 nm.