CCR2a - C-C Chemokine Receptor type 2 isoform A # PL022

Product specification

Acronym: CCR2a
Synonyms: MCP1R
Origin species : Human
Protein reference : P41597 (UniProtKB)
U03882.1 (GenBank)
Family: GPCR class A

Expression system: E.coli based CFPS
Format: Proteoliposomes
Protein sequence: Met1 – Ala374
Tag : 6xHis tag (N-ter)
Cleavage site: Factor Xa
Product MW: 44.5 kDa
Application: Drug screening & discovery, antibody development, structural biology

Product description

CCR2 is a member of the beta chemokines receptors family. This gene encodes two isoforms of a receptor for monocyte chemoattractant protein-1, a chemokine which specifically mediates monocyte chemotaxis. Monocyte chemoattractant protein-1 is involved in monocyte infiltration in inflammatory diseases such as rheumatoid arthritis as well as in the in flammatory response against tumor. The receptors encoded by this gene mediate agonist-dependent calcium release.

Recombinant protein sequence

His tag – **factor X cleavage site** -
MLSTSRSRFIRNTNESGEEVTTFFDYDYGAPCHKFDVKQIGAQLLPPLYSLVFIFGFVGNMLVVLILINCKKLKCLTDIYLLNLAISDLL
FLITLPLWAHSAANEWVFGNAMCKLFTGLYHIGYFGGIFFIILLTIDRYLAIVHAVFALKARTVTFGVVTSVITWLVAVFASVPGIIFT
KCQKEDSVYVCGPYFPRGWNNFHTIMRNILGLVLPLLIMVICYSGILKTLLRCRNEKKRHRAVRVIFTIMIVYFLFWTPYNIVILLNT
FQEFFGLSNCESTSQLDQATQVTETLGMTHCCINPIIYAFVGEKFRSLFHIALGCRIAPLQKPVCGGPGVRPGKNVKVTTQGLLDGR
GKGKSIGRAPEASLQDKEGA

Quality analysis

Purity:
Liposomes are directly incorporated into the Cell-Free reaction, thus, some impurities from the *E.coli* lysate might be present in the proteoliposomes.
A negative control (proteoliposomes without the protein of interest) can be provided (useful for screening, immunization…).
The purity can be improved by protein expression in detergent and relipidation after purification step(s).

Purification procedure: CCR2a proteoliposomes are purified on a sucrose gradient.

NB : Migration of membrane proteins on SDS-PAGE can results in « gel shifting » due to the presence of hairpins (helix-loop-helix)[1-3].

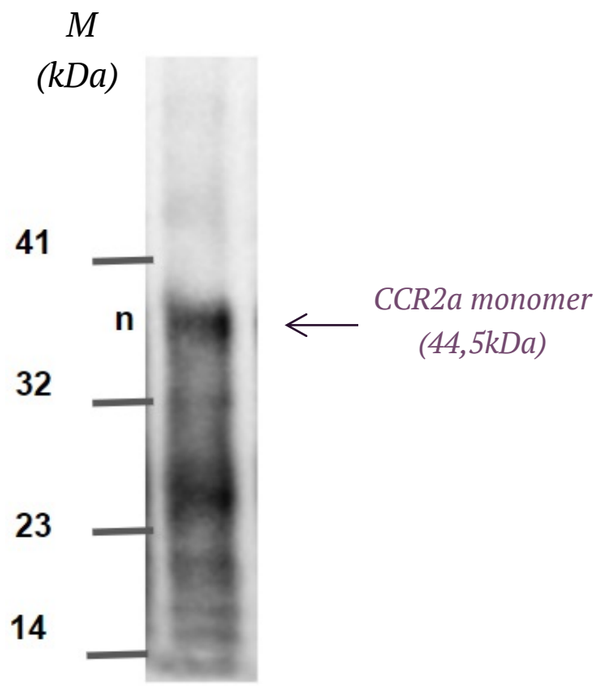


Fig.1: *Identification of CCR2a in the proteoliposomes by Western Blot (using an anti-6xHis antibody).*

References :
1 – Rath A., et al., Detergent binding explains anomalous SD-PAGE migration of membrane proteins PNAS, 2009 Feb 10, vol. 106
2 – Rath A., et al., Acrylamide concentration determines the direction and magnitude of helical membrane protein gel shifts, PNAS, 2013 Sep 24, 110(39)
3 – Rath A., et al., Correction factors for membrane protein molecular weight readouts on sodium dodecyl sulfate-polyacrilamide gel electrophoresis, Anal. Biochem., 2013 Mar 1, 434(1)

Formulation

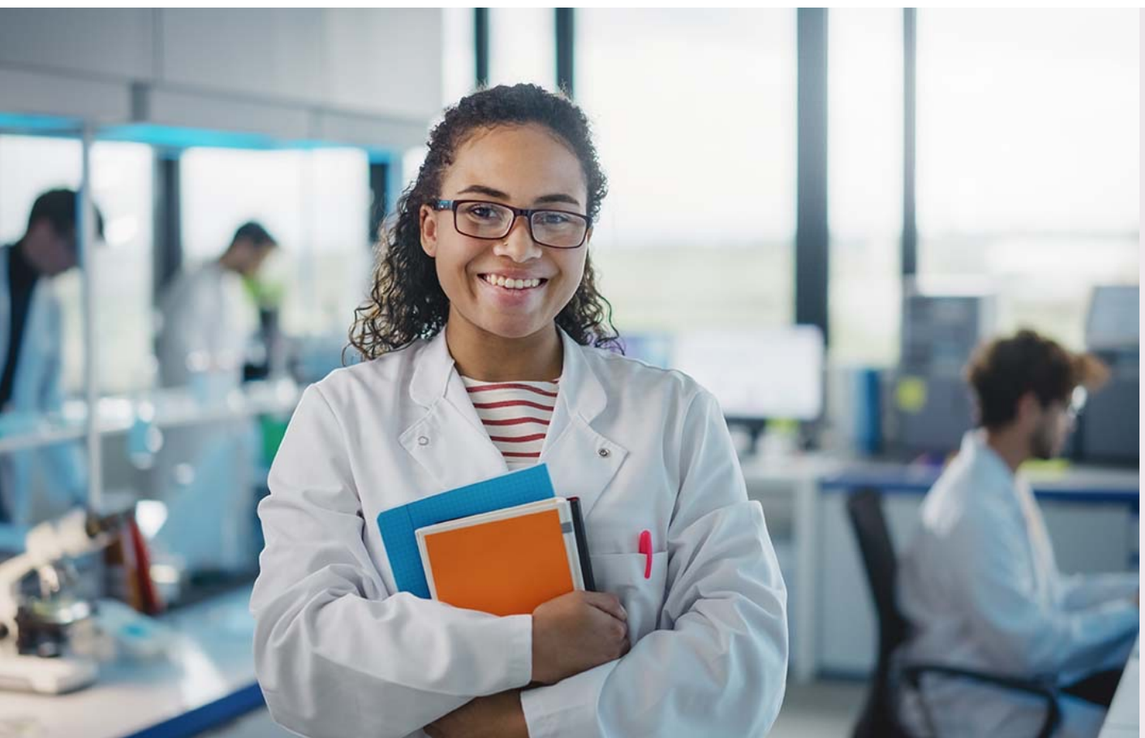
Buffer: Available in Hepes 50mM, pH 7.5 with cryoprotectants. Other buffers or customized formulation can be provided upon request.

Customized Hydrophobic matrix: Customized formulation with specific lipids like PEGylated or biotinylated lipids can be used upon request, as well as targeting molecules.

Storage/Stability: Store at +4°C for up to one week or several months at -80°C. Aliquot for storage.
Do not freeze-thaw after aliquoting.

Use restrictions: For life science research use only.

Available sizes: 10 µg, 50 µg, 100 µg, customized quantity on request.



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