

## Animal-Free CCL2 Protein, Pig (His)

<b>Cat. No.:</b>	HY-P700231AF
<b>Synonyms:</b>	C-C motif chemokine 2; CCL2; HC11; MCAF; MCP-1; HSMCR30; MCP1; SCYA2; SMC-CF; GDCF-2
<b>Species:</b>	Pig
<b>Source:</b>	E. coli
<b>Accession:</b>	P42831 (Q24-P99)
<b>Gene ID:</b>	397422
<b>Molecular Weight:</b>	Approximately 9.42 kDa

### PROPERTIES

<b>AA Sequence</b>	<p>Q P D A I N S P V T    C C Y T L T S K K I    S M Q R L M S Y R R    V T S S K C P K E A</p> <p>V I F K T I A G K E    I C A E P K Q K W V    Q D S I S H L D K K    N Q T P K P</p>
<b>Appearance</b>	Lyophilized powder.
<b>Formulation</b>	Lyophilized from a solution containing 1X PBS, pH 7.4.
<b>Endotoxin Level</b>	<0.1 EU per 1 µg of the protein by the LAL method.
<b>Reconstitution</b>	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH <sub>2</sub> O.
<b>Storage &amp; Stability</b>	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
<b>Shipping</b>	Room temperature in continental US; may vary elsewhere.

### DESCRIPTION

<b>Background</b>	<p>CCL2 protein functions as a ligand for C-C chemokine receptor CCR2, initiating a potent chemotactic response and intracellular calcium mobilization through the binding and activation of CCR2. It exhibits chemotactic activity for monocytes and basophils while remaining inactive towards neutrophils or eosinophils. Playing a crucial role in mediating neuropathic pain induced by peripheral nerve injury, CCL2 also enhances NMDA-mediated synaptic transmission in dopamine D1 and D2 receptor-containing neurons, possibly involving MAPK/ERK-dependent phosphorylation of GRIN2B/NMDAR2B. Existing as a monomer or homodimer in equilibrium, it is tethered to endothelial cells by glycosaminoglycan (GAG) side chains of proteoglycans and interacts with TNFAIP6 through its Link domain.</p>
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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