Chemerin/RARRES2 Protein, Human (HEK293, His)

Cat. No.:	HY-P70099
Synonyms:	rHuRetinoic acid receptor responder protein 2/Chemerin, His; Retinoic acid receptor responder protein 2; Chemerin; RAR-responsive protein TIG2; Tazarotene-induced gene 2 protein; RARRES2; TIG2
Species:	Human
Source:	HEK293
Accession:	Q99969 (E21-S157)
Gene ID:	5919
Molecular Weight:	16-20 kDa

PROPERTIES

AA Sequence	E L T E A Q R R G L Q V A L E E F H K H P P V Q W A F Q E T S V E S A V D T P F P A G I F V R L E F K L Q Q T S C R K R D W K K P E C K V R P N G R K R K C L A C I K L G S E D K V L G R L V H C P I E T Q V L R E A E E H Q E T Q C L R V Q R A G E D P H S F Y F P G Q F A F S
Biological Activity	Measured in a cell proliferation assay using HUVEC human ureteral epithelial cell. The ED_{50} for this effect is 7.695 ng/mL, corresponding to a specific activity is 1.3×10^5 units/mg.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μm filtered solution of 20 mM PB, 150 mM NaCl, pH 7.4.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
Storage & Stability	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.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	Chemerin/RARRES2 protein, an adipocyte-secreted adipokine, intricately regulates adipogenesis, metabolism, and inflammation by activating the chemokine-like receptor 1 (CMKLR1) and also functioning as a ligand for CMKLR2. While it can bind to C-C chemokine receptor-like 2 (CCRL2) with lower affinity than CMKLR1 or CMKLR2, its primary role involves positive regulation of adipocyte differentiation and modulation of adipocyte gene expression related to lipid and glucose metabolism. Additionally, Chemerin/RARRES2 plays a potential role in angiogenesis, a critical process for white adipose

tissue expansion. Acting as a pro-inflammatory adipokine, it stimulates the secretion of pro-inflammatory and prodiabetic adipokines, adversely impacting adipose tissue metabolic function and leading to systemic effects such as impaired insulin sensitivity, altered glucose and lipid metabolism, and compromised vascular function in other tissues. The protein exhibits both pro- and anti-inflammatory properties based on enzymatic cleavage by different proteases, functioning as a chemotactic factor for leukocyte populations expressing CMKLR1 and exerting an anti-inflammatory role by inhibiting TNF/TNFA-induced VCAM1 expression in vascular endothelial cells. This dual role suggests a potential link between chronic inflammation, obesity, and associated disorders like type 2 diabetes and cardiovascular disease, while also exhibiting an antimicrobial function in the skin.

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