Recombinant Rat CXCL1/GRO-alpha Protein



RPCB1282

Product Information

Product SKU: RPCB1282 **Gene ID**: 81503 **Size**: 10μg

Tag: C-Avi-His **Reactivity**: Rat

Additional Information

Expression Host: HEK293 cells **Swissprot**: P14095

Purity: -

Protein Information

Background:

CXCL1, also known as KC, GRO alpha, and CINC-1, is an approximately 8 kDa proinflammatory chemokine that plays a key role in neutrophil migration and activation. Mature human CXCL1 shares 64% and 67% aa sequence identity with mouse and rat CXCL1, respectively. It is produced by many cell types in inflammatory sites and during chronic inflammatory diseases. CXCL1 can associate into bioactive dimers and primarily signals through CXCR2/IL-8 RB but can also bind with lower affinity to CXCR2/IL-8 RA. It induces neutrophil migration, extravasation, respiratory burst, and degranulation and also induces T cells to produce proinflammatory IL-17. CXCL1 additionally binds to Syndecan-1 on epithelial cells which acts as a sink for CXCL1 activity until Syndecan-1 cleavage by MMP-7. CXCL1 is up-regulated in spinal cord astrocytes by inflammatory stimuli or tumor cell injection, and it exacerbates pain sensation by potentiating excitatory NMDA neurotransmission. In the circulatory system, CXCL1 interacts with CXCR2 on endothelial cells to promote lymphatic tube formation and angiogenesis. It promotes the hypertrophic differentiation of chondrocytes resulting in cartilage matrix deposition, calcification, and remodeling. It interacts with both CXCR1 and CXCR2 on adipose stromal cells and promotes their recruitment to prostate tumors in obese patients.. It also binds CXCR2 on ovarian cancer cells, leading to cleavage of cell surface HB-EGF, transactivation of EGF R, and cell proliferation.

Protein Description: High quality, high purity and low endotoxin recombinant Recombinant Rat

CXCL1/GRO-alpha Protein, tested reactivity in HEK293 cells and has been validated

in SDS-PAGE.100% guaranteed.

Endotoxin: $< 0.1 EU/\mu g$ of the protein by LAL method.

Formulation: Lyophilized from a 0.22 µm filtered solution of PBS, pH 7.4.

Storage: Store at -20°C. Store the lyophilized protein at -20°C to -80 °C up to 1 year from the

date of receipt.After reconstitution, the protein solution is stable at -20°C for 3

months, at 2-8°C for up to 1 week.