

CXCL7 Protein, Rat, Recombinant (His)

General Information

Synonyms:	pro-platelet basic protein (chemokine (C-X-C motif) ligand 7)
Protein Construction:	A DNA sequence encoding the rat Cxcl7 (NP_714943.1) (Lys38-Tyr111) was expressed with a polyhistidine tag at the C-terminus. Predicted N terminal: Lys 38
Species:	Rat
Expression Host:	P. pastoris (Yeast)
Accession:	A6KKE5
Molecular Weight:	9.6 kDa (predicted)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 95 % as determined by SDS-PAGE.
Endotoxin:	Please contact us for more information.
Formulation:	Lyophilized from a solution filtered through a 0.22 µm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:
A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:
It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:
In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Pro-platelet basic protein (PPBP) is also known as Chemokine (C-X-C motif) ligand 7 (CXCL7) and nucleosome assembly protein (Nap-2). Nap-2 / PPBP / CXCL7 is released in large amounts from platelets following their activation and is a platelet-derived growth factor that belongs to the CXC chemokine family. This growth factor is a potent chemoattractant and activator of neutrophils. Nap-2 / PPBP / CXCL7 has been shown to stimulate various cellular processes including DNA synthesis, mitosis, glycolysis, intracellular cAMP accumulation, prostaglandin E2

secretion, and synthesis of hyaluronic acid and sulfated glycosaminoglycan. It also stimulates the formation and secretion of plasminogen activator by synovial cells. Nap-2 is a ligand for CXCR1 and CXCR2, and Nap-2, Nap-2 (73), Nap-2 (74), Nap-2 (1-66), and most potent Nap-2 (1-63) are chemoattractants and activators for neutrophils. Cancer ImmunotherapyImmune CheckpointImmunoTherapyTargeted Therapy

Reference

Walz A,et al.(1989) Effects of the neutrophil-activating peptide NAP-2, platelet basic protein, connective tissue-activating peptide III and platelet factor 4 on human neutrophils. J Exp Med. 170(5):1745-50.

Walz A,et al.(1990) Generation of the neutrophil-activating peptide NAP-2 from platelet basic protein or connective tissue-activating peptide III through monocyte proteases. J Exp Med. 171(2): 449-54.

Loetscher P,et al.(1994) Both interleukin-8 receptors independently mediate chemotaxis. Jurkat cells transfected with IL-8R1 or IL-8R2 migrate in response to IL-8, GRO alpha and NAP-2. FEBS Lett. 341(2-3): 187-92.

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