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DATA SHEET

Reagent:	pQE30T gly-met SDF-1α/CXCL12
Catalog Number:	11435
Lot Number:	130269
Release Category:	C
Provided:	5 µg of dried purified DNA stabilized in DNAstable *PLUS*
Description:	The pQE30 plasmid from QIAGEN was modified to contain a tobacco etch virus (TEV) protease cleavage site following the hexa-histidine tag and preceding the multiple cloning site. The DNA encoding mature SDF-1α was cloned into the BamHI (5') and HindIII (3') sites. Subsequently, site directed mutagenesis was used to modify the TEV protease site from ENLYFQGS to ENLYFQGM. This results in the DNA coding for modified TEV protease site preceding the DNA coding for mature SDF-1α. Since mature SDF-1α protein has no Met residues, SDF-1α expressed with this vector can be subjected to CNBr cleavage to remove the hexa-histidine tag. This leaves mature SDF-1α with a native N-terminus. XL-1 blue *E. coli* should be used for propagation or production of more plasmid. SG 13009 *E. coli* with pREP4 should be used for expression.
Special Characteristics:	This clone is unique in that the mature SDF-1α sequence is preceded by a Met residue. Since the mature SDF-1α sequence has no Met residues CNBr cleavage can be used to generate the native N-terminus of SDF-1α, which is essential for signaling. Sequence This reagent is currently being provided as dried purified DNA stabilized in DNAstable *PLUS*. Please see the notice for additional information and the protocol for reconstitution of dried DNA reagents. Dried DNA Notice
Recommended Storage:	Keep the reagent at room temperature in a dry storage cabinet or in a moisture barrier bag.
Contributor:	Dr. Brian F. Volkman

References:

Veldkamp, C. T., Peterson, F. C., Hayes, P. L., Mattmiller, J. E., Haugner, J. C., 3rd, de la Cruz, N. & Volkman, B. F. (2007). On-column refolding of recombinant chemokines for NMR studies and biological assays. *Protein Expr. Purif.* **52**, 202-209.

Veldkamp, C. T., Seibert, C., Peterson, F. C., Sakmar, T. P. & Volkman, B. F. (2006). Recognition of a CXCR4 sulfotyrosine by the chemokine stromal cell-derived factor-1α (SDF-1α/CXCL12). *J. Mol. Biol.* **359**, 1400-1409.

Veldkamp, C. T., Peterson, F. C., Pelzek, A. J. & Volkman, B. F. (2005). The monomer-dimer equilibrium of stromal cell-derived factor-1 (CXCL 12) is altered by pH, phosphate, sulfate, and heparin. *Protein Sci.* **14**, 1071-1081.

NOTE:

Acknowledgment for publications should read "The following reagent was obtained through the NIH AIDS Reagent Program, Division of AIDS, NIAID, NIH (Cat#11435) from Dr. Volkman." Also include the reference cited above in any publications.

Scientists at for-profit institutions or who intend commercial use of Release Category C Reagents (Cat #11435) must contact Dr. Brian F. Volkman, Department of Biochemistry, Medical College of Wisconsin, 8701 Watertown Plank Rd, Milwaukee WI 53202, bvolkman@mcw.edu, before the reagent can be released.

Last Updated: June 21, 2018