

GST-GAR

CATALOG NO.: HMT-11-137

LOT NO.:

DESCRIPTION: Glycine and Arginine Rich sequence from the N-terminus of fibrillarlin (residues 2-78; Genbank Accession # NM_001436; MW = 32.9 kDa) expressed in *E. coli* with an N-terminal GST-tag. GST-GAR constructs have frequently been used in the assay of arginine methyltransferases (PRMTs) by radiolabeling with [³H]-S-adenosylmethionine (e.g. gel electrophoresis/autoradiography or filterplate/scintillation counting; see for example¹⁻⁴). Typically this involves GST-GAR comprising residues 1-148 of fibrillarlin, however, RBC has found that the 2-78 construct produces a more stable product that supports higher levels of PRMT activity.

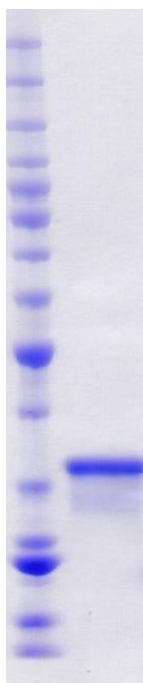
PURITY: >90% by SDS-PAGE.

ASSAY CONDITIONS: Arginine methyltransferase assays (see figure, below) were performed with GST-GAR and [³H]-SAM as substrates. Activity was determined as TCA-precipitated counts in a scintillation/filter plate assay (Multiscreen FB, Topcount). Reaction conditions: 50 mM Tris-HCl, pH 8.5, 50 mM NaCl, 5 mM MgCl₂, 1 mM DTT, 1 mM PMSF, 30°C, 60 min.

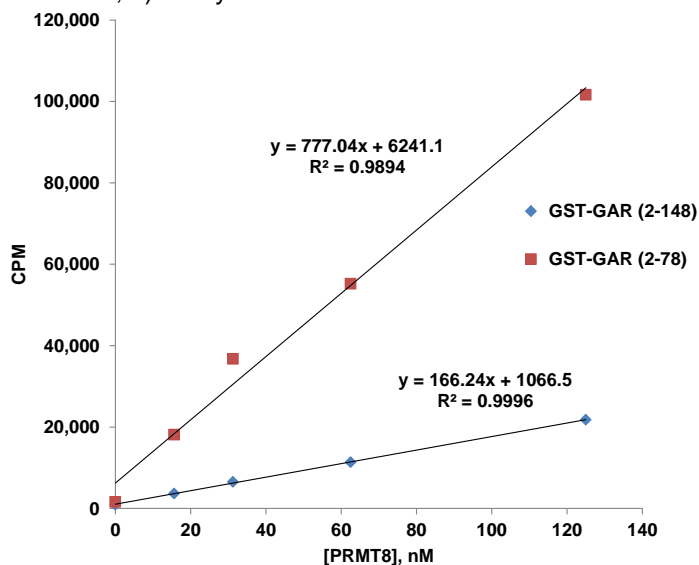
SUPPLIED AS: ___ µg/µl total protein in in 50 mM Tris/HCl pH 7.5, 500 mM NaCl, 1 mM TCEP, 10% glycerol (v/v) as determined by OD₂₈₀

STORAGE: -70°C. Thaw quickly and store on ice before use. The remaining, unused, undiluted protein should be snap frozen, for example in a dry/ice ethanol bath or liquid nitrogen. Minimize freeze/thaws if possible, but very low volume aliquots (<5 µl) or storage of diluted enzyme is not recommended.

REFERENCES: 1) T.M. Lakowski & A. Frankel *Biochem. J.* 2009 **421** 253; 2) C.I. Zurita-Lopez *et al. J.Biol Chem.* 2012 **287** 7859; 3) J. Sayegh *et al. J.Biol Chem.* 2007 **282** 36444; 4) D. Hyllus *et al. Genes Dev.* 2007 **21** 3369



Coomassie blue stained SDS-PAGE (4-12% acrylamide) of 4 µg of purified GST-GAR. MW markers at left are, from top: 220, 160, 120, 100, 90, 80, 70, 60, 50, 40, 30, 25, 20, 15, & 10 kDa.



Assay of PRMT8 with Two GST-GAR Constructs. PRMT8 (RBC Cat. # HMT-11-135) activity was assayed as a function of enzyme concentration, 60 min., 30°C, with 1 µM [³H]-SAM and 0.05 mg/mL of the indicated GST-GAR as substrates, in 25 µL reactions. Activity was measured as TCA-precipitable counts per min. in a scintillation/filter plate assay.

This product is NOT intended for therapeutic or diagnostic use in animals or in humans.