

## OGT/O-GlcNAc transferase antibody (pAb)

**Catalog Nos:** 61355, 61356

**RRID:** AB\_2793604

**Isotype:** IgG

**Application(s):** ChIP, ChIP-Seq, WB

**Reactivity:** Human, Mouse

**Volumes:** 100  $\mu$ l, 10  $\mu$ l

**Purification:** Affinity Purified

**Host:** Rabbit

**Concentration:** 0.49  $\mu$ g/ $\mu$ l

**Molecular Weight:** 120 kDa

**Background:** OGT (O-linked N-acetylglucosamine (GlcNAc) transferase) catalyzes the transfer of a single N-acetylglucosamine from UDP-GlcNAc to serine or threonine residues in cytoplasmic and nuclear proteins resulting in their modification with a beta-linked N-acetylglucosamine (O-GlcNAc). OGT can glycosylate a large and diverse number of proteins including HCF1, AKT1, MLL5 and histone H2B. It can regulate their cellular processes via cross-talk between glycosylation and phosphorylation or by affecting proteolytic processing. Specifically OGT has been shown to interact directly with TET2 and TET3, enzymes that catalyze the oxidation of 5-methylcytosine on DNA. The TET/OGT interaction leads to GlcNAcylation of HCF1, a protein component of the COMPASS complex, which regulates H3K4 methylation and gene expression.

**Immunogen:** This antibody was raised against a recombinant protein corresponding to the N-terminal region of human OGT.

**Buffer:** Purified IgG in 70 mM Tris (pH 8), 105 mM NaCl, 31 mM glycine, 0.07 mM EDTA, 30% glycerol and 0.035% sodium azide. Sodium azide is highly toxic.

### Application Notes:

Applications Validated by Active Motif:

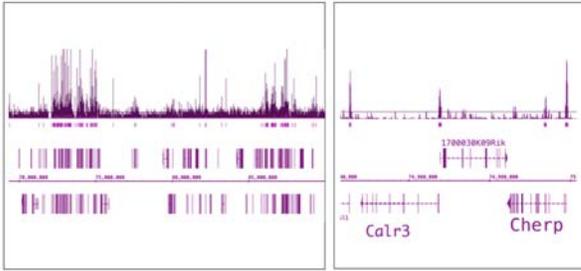
ChIP: 5  $\mu$ l per ChIP

ChIP-Seq & ChIP-chip: 5  $\mu$ l each

WB: 1:500- 1:2,000 dilution

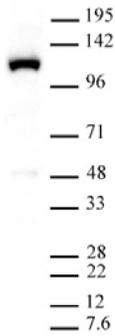
**Storage and Guarantee:** Some products may be shipped at room temperature. This will not affect their stability or performance. Avoid repeated freeze/thaw cycles by aliquoting items into single-use fractions for storage at -20°C for up to 2 years. Keep all reagents on ice when not in storage. This product is guaranteed for 12 months from date of receipt.

This product is for research use only and is not for use in diagnostic procedures.



**OGT/O-GlcNAc transferase (pAb) tested by ChIP-Seq.**

ChIP was performed using the ChIP-IT<sup>®</sup> High Sensitivity Kit (Cat. No. 53040) with chromatin from 3 million primary mouse T cells and 5  $\mu$ l of OGT antibody. ChIP DNA was sequenced on the Illumina HiSeq and 14 million sequence tags were mapped to identify OGT binding sites. The image on the left shows many OGT binding sites within a 25 million bp region on mouse chromosome 8. The image on the right shows that binding sites are localized to gene promoters as expected based on the known interaction with the H3K4 methylating COMPASS complex.



**OGT/O-GlcNAc transferase (pAb) tested by Western blot.**

Detection of OGT/O-GlcNAc transferase by Western blot. The analysis was performed using 20  $\mu$ g HeLa whole-cell extract and OGT/O-GlcNAc transferase (pAb) at a 1:500 dilution.