

## Recombinant NSD2 (MMSET) protein

**Catalog No:** 31453, 31853

**Lot No:** 21417007

**Expressed In:** Baculovirus

**Quantity:** 20, 1000 µg

**Concentration:** 0.3 µg/µl

**Source:** Human

**Buffer Contents:** Recombinant NSD2 (MMSET) protein is supplied at a concentration of 0.3 µg/µl in 25 mM HEPES-NaOH pH 7.5, 500 mM NaCl, 5% glycerol, 0.04% Triton X-100, 0.2 mM TCEP.

**Background:** NSD2 (MMSET) (Multiple Myeloma SET domain-containing protein) / WHSC1 (Wolf-Hirschhorn Syndrome Candidate 1; also known as NSD2, Nuclear Receptor binding SET domain protein 2; TRX5, Trithorax 5) is a SET domain-containing histone methyltransferase specific for lysine 36 of histone H3. The NSD2 (MMSET) gene is deleted in Wolf-Hirschhorn syndrome, a disorder characterized by developmental defects and mental retardation. In 15% of patients with Multiple Myeloma (MM), a chromosomal translocation leads to NSD2 (MMSET) gene being aberrantly placed under the control of the IgH intronic µ enhancer and expressed at very high levels. This event is apparently a key component in cellular transformation leading to MM. Reduction in NSD2 (MMSET) expression in a myeloma cell line suppressed its growth, suggesting a role for NSD2 (MMSET) in maintaining the transformed state.

**Protein Details:** Recombinant NSD2 (MMSET) (accession number NP\_579877.1) was expressed in Sf9 cells and contains an N-terminal FLAG-Tag with an observed molecular weight of 154 kDa. The recombinant protein is ≥ 75% pure by SDS-PAGE.

**Application Notes:** Recombinant NSD2 (MMSET) is suitable for use in the study of enzyme kinetics, inhibitor screening, and selectivity profiling.

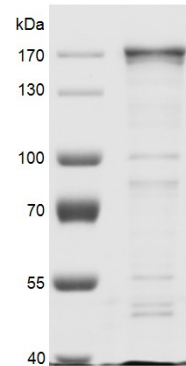
### HMT Assay Conditions:

2 µg recombinant nucleosomes were incubated with different concentrations of NSD2 (MMSET) protein in 30 µl reaction system including 50 mM Tris-HCl pH 8.6, 0.02% Triton X-100, 2 mM MgCl<sub>2</sub>, 1 mM TCEP, 50 µM SAM for 3 hours at room temperature. Activity was detected by Western Blot.

**Storage and Guarantee:** Recombinant proteins in solution are temperature sensitive and must be stored at -80°C to prevent degradation. Avoid repeated freeze/thaw cycles and keep on ice when not in storage. This product is guaranteed for 6 months from date of receipt.

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

MMSET / WHSC1



### Recombinant NSD2 (MMSET) protein gel.

NSD2 (MMSET) protein was run on a 8% SDS-PAGE gel and stained with Coomassie blue.

MW: 154 kDa

Purity: > 75%



### NSD2 (MMSET) activity assay.

2 µg recombinant nucleosomes (Cat #: 31468) were incubated with NSD2 in 30 µl reaction system for 3 hr. at room temp. Reaction products were run on a 12.5% SDS-PAGE gel and detected with H3K36me2 antibody. NSD2 only was used as negative control. Results show that nucleosomes are better than octamers as substrates for NSD2.