

## SAT1 Human

**Description:** SAT1 Human Recombinant fused with a 20 amino acid His tag at N-terminus produced in E.Coli is a single, non-glycosylated, polypeptide chain containing 191 amino acids (1-171 a.a.) and having a molecular mass of 22.1kDa. The SAT1 is purified by proprietary chromatographic techniques.

Catalog #: ENPS-440

For research use only.

**Synonyms:** Diamine acetyltransferase 1, Spermidine/spermine N(1)-acetyltransferase 1, Putrescine acetyltransferase, Polyamine N-acetyltransferase 1, SSAT-1, SSAT, SAT1, SAT, DC21, KFSD, KFSDX.

**Source:** Escherichia Coli.

**Physical Appearance:** Sterile Filtered colorless solution.

**Amino Acid Sequence:** MGSSHHHHHH SSGLVPRGSH MAKFVIRPAT AADCSDILRL  
IKELAKYEYM EEQVILTEKD LLEDGFGEHP FYHCLVAEVP KEHWTPEGHS IVGFAMYYFT  
YDPWIGKLLY LEDFFVMSDY RGFIGSEIL KNLSQVAMRC RCSSMHFLVA EWNEPSINFY  
KRRGASDLSS EEGWRLFkid KEYLLKMATE E.

**Purity:** Greater than 95.0% as determined by SDS-PAGE.

### Formulation:

The SAT1 solution contains 20mM Tris-HCl buffer (pH8.0) and 10% glycerol.

### Stability:

Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Avoid multiple freeze-thaw cycles.

### Usage:

NeoBiolab's products are furnished for LABORATORY RESEARCH USE ONLY. The product may not be used as drugs, agricultural or pesticidal products, food additives or household chemicals.

### Introduction:

SAT-1 is a member the acetyltransferase family, and is a rate-limiting enzyme in the catabolic pathway of polyamine metabolism. SAT1 catalyzes the acetylation of spermidine and spermine, and is involved in the regulation of the intracellular concentration of polyamines and their transport out of cells. Therefore, SAT-1s role is essential in polyamine homeostasis, given that acetylated products are either excreted from the cell or oxidized by acetyl polyamine oxidase. Increased SAT1 activity causes variety of other effects which include pancreatic cells death, obstruction of regenerative tissue growth, behavioral changes, keratosis follicularis spinulosa decalvans (KFSD), and hair loss. Defects in the SAT1 gene are linked to KFSD (keratosis follicularis spinulosa decalvans), which is a rare X-linked disorder affecting the skin and the eye. The KFSD affected men show thickening of the skin of the neck, ears, and extremities, particularly the palms and soles, loss of eyebrows, eyelashes and beard, thickening of the eyelids with blepharitis and ectropion, and corneal degeneration. Even though the majority of the affected families are compatible with an X-linked inheritance, KFSD are found to be clinically and genetically heterogeneous.

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