

# SUMO1-Rhodamine 110

Cat. No. SBB-PS0028  
Lot. No. 163060028

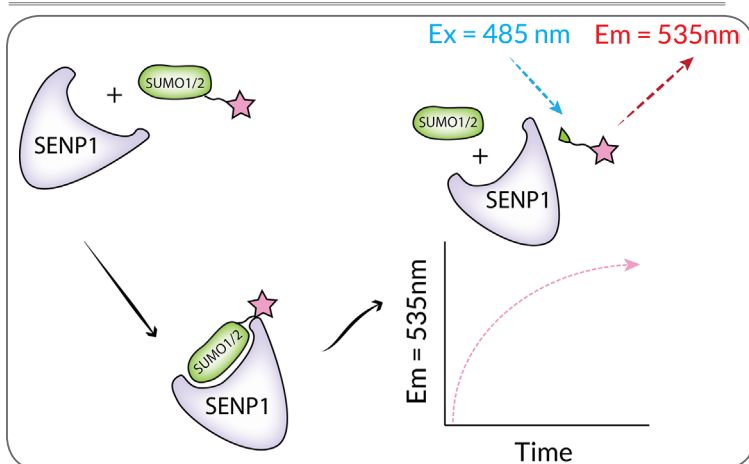


# South Bay Bio

## SUMO1 Rhodamine 110

Ubiquitin-like protein that can be covalently attached to proteins as a monomer or a lysine-linked polymer. Covalent attachment via an isopeptide bond to its substrates requires prior activation by the E1 complex SAE1-SAE2 and linkage to the E2 enzyme UBE2I, and can be promoted by E3 ligases such as PIAS1-4, RANBP2 or CBX4. This post-translational modification on lysine residues of proteins plays a crucial role in a number of cellular processes such as nuclear transport, DNA replication and repair, mitosis and signal transduction.

This SUMO1 substrate is C-terminally derivatized with a bis-Gly-Rhodamine-110 fluorophore. The bis-Gly-Rh110 is quenched until the amide bond between the C-terminal glycine and the bis-Gly-Rh110 compound is hydrolyzed to mono-Gly-Rhodamine 110. The efficiency of quenching combined with the powerful signal upon hydrolysis yields a reagent with unparalleled signal-to-background. SUMO1-Rh110 can be used to study the deSUMOylating activity of hydrolases SENP1 and SENP2, or other deSUMOylating enzymes. The substrate activity of SUMO1-Rhodamine110 was determined by measuring the SENP1 catalyzed release of unquenched mono-Gly-Rh110. The Excitation and Emission of this substrate is 485nm and 535nm respectively. This protein was expressed in *E.coli*.



## Product Information

**Quantity:** 50µg **Molecular Weight:** 11.5 kDa

**Concentration:** 160uM, 1.8 mg/mL

**Purity:** >97% by LCMS

**Excitation/Emission** = 485nm/535nm

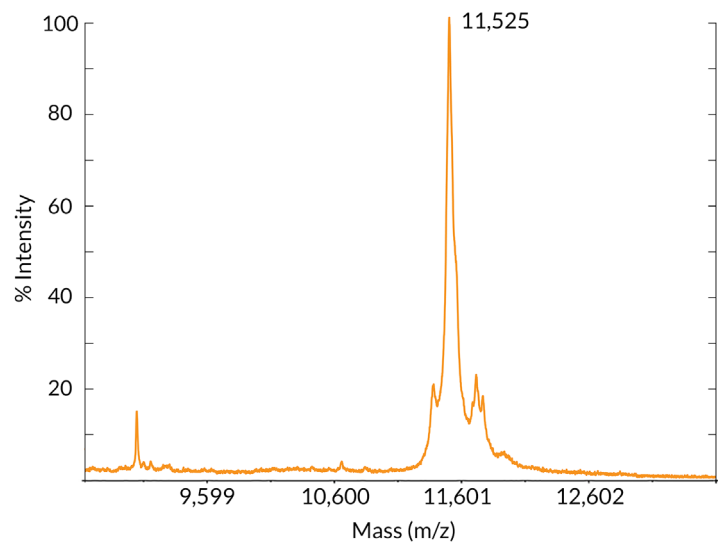
**Storage Buffer:** 50mM Hepes pH 7.5, 100mM NaCl

**Storage:** -80C, Avoid multiple freeze / thaw

**Usage:** Typical experimental concentration 50-500 nM.

## Quality Control and Performance Data

### Mass Spectrometry Data



**LCMS.** Analysis of SUMO1 Rhodamine 110 using LCMS intact mass determination indicates purity greater than 98%, and a molecular weight of 11,525 daltons.

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[www.southbaybio.com](http://www.southbaybio.com)

Contact:  
[info@southbaybio.com](mailto:info@southbaybio.com)

5941 Optical Ct, Suite 229  
San Jose, CA 95138 USA

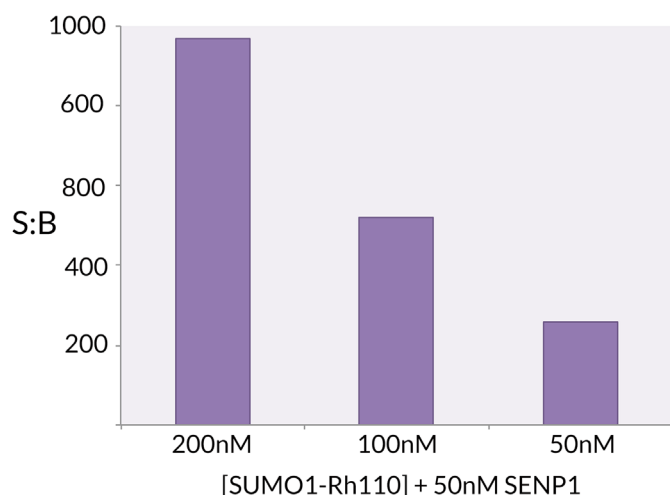
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## Quality Control and Performance Data



### Signal to Background.

The signal to background ratio was determined by 100% hydrolysis of 200nM, 100nM, and 50nM SUMO1-Rhodamine 110 to liberate the quenched conjugate. Assay Buffer: 50mM HEPES pH7.5, 1mM TCEP, 0.1mg/ml BSA.

## References

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Contact:  
[info@southbaybio.com](mailto:info@southbaybio.com)

5941 Optical Ct, Suite 229  
San Jose, CA 95138 USA