LEADING LIGHT® Sclerostin-LRP Interaction Screening System

Novel Cell-free Sclerostin/LRP Binding Assay Ideal for Primary Inhibitor Screens

The LEADING LIGHT® Sclerostin Screening System is a 1x96 well plate assay based on Sclerostin–LRP interaction. This system contains engineered LRP5-alkaline phosphatase (ALP) and human Sclerostin immobilized in a multi-well plate. LRP5-alkaline phosphatase binds to Sclerostin coated on the bottom of the well and is detected by the activity of alkaline phosphatase remaining after a washing step. This system can be used for drug screening to identify small molecule compounds, antibodies, DNA aptamers and peptides capable of modulating sclerostin-LRP interaction.

Sclerostin is encoded by the SOST gene and serves as a negative regulator of bone formation. Wnt ligands bind to Frizzled (Fz) and LRP5/6 receptors to trigger the canonical Wnt signaling cascade, which has been reported to play an important role in bone development. Sclerostin can bind to LRP5/6 to inhibit the canonical Wnt signaling. Antibodies against Sclerostin can block Sclerostin-mediated Wnt inhibition in cell based assays and increase bone mineral density in animal models. Importantly clinical trial studies demonstrate that antibodies against Sclerostin can also increase human bone mineral density. Consequently, Sclerostin is thought to be a superior therapeutic target for osteoporosis treatment over current implemented methods such as treatment with bisphosphonate derivatives.

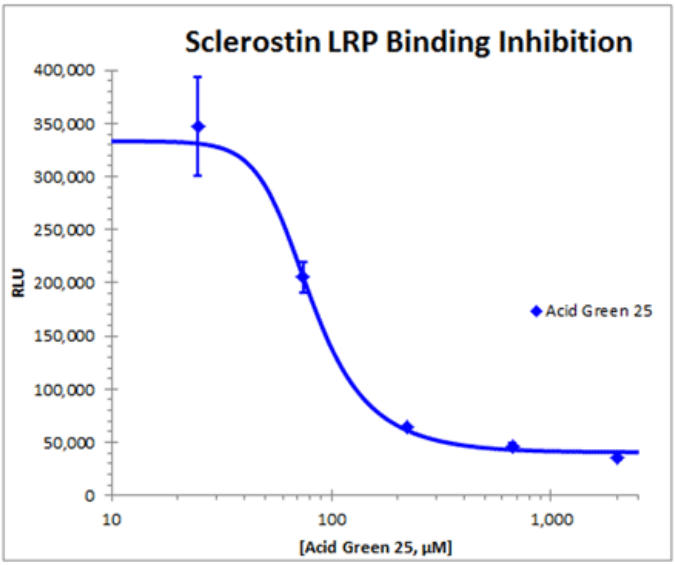
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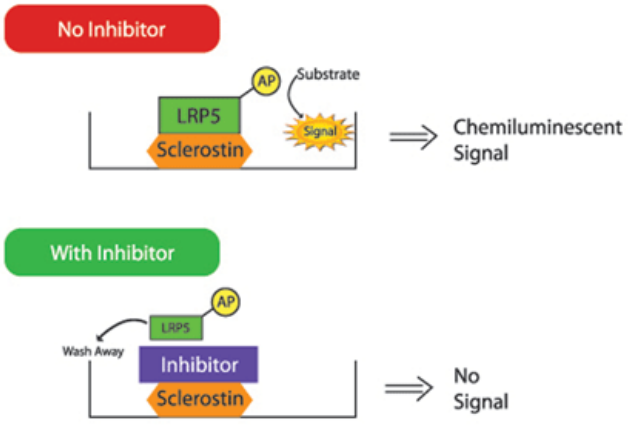
ENZ-61003-0001	96 wells

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- High sensitivity chemiluminescent readout (signal-to-noise ratio of ≥ 10)
- Rapid protocol yields results in just 2.5 hours
- No cell lines or transfection reagents required
- Reproducible, high-throughput amenable assay (Z'-factor 0.871)
- Amenable for high-throughput screening applications



Inhibition of Sclerostin binding by Acid Green 25. The LRP5-ALP was bound to sclerostin in the presence of the indicated concentration of Acid Green 25 used to inhibit this interaction.





Handling & Storage

Use/Stability	As indicated on product label or CoA when stored as recommended.
Handling	Upon receipt, the kit should be stored at -20° C until kit is used. Upon first use of kit, PBS, Wash Buffer, and ALP Substrate may be stored at 4°C. Avoid freeze/thaw cycles.
Long Term Storage	-20°C
Shipping	Blue Ice

Regulatory Status

RUO - Research Use Only

Product Details

Alternative Name	Sclerostin-LRP binding kit, SOST
Application	Chemiluminescence, FUNC, HTS
Assay Time	2.5 hours
Contents	Sclerostin microtiter plate, LRP5-ALP fusion protein concentrate, ALP concentrate (negative control), PBS solution, Blocking agent, wash buffer, acid green 25, ALP substrate reagent, plate sealer
Species Reactivity	Human
Technical Info / Product Notes	**Application Notes**: *Detecting LEADING LIGHT® Sclerostin-LRP Screening System using the CLARIOstar® and LVF-Monochromator*
UniProt ID	Q9BQB4

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