Product Description
LY411575 is a cell-permeable γ-secretase inhibitor (IC₅₀ = 0.14 nM) that has been shown to block Notch activation in vitro at 500 µM (Curry et al.; Czirr et al.). γ-Secretase is a multi-subunit aspartyl protease that regulates signaling pathways by proteolytically cleaving substrates, abrogating or releasing signaling molecules. Notch is a transmembrane receptor that plays a key role in cell fate decisions including cell proliferation, differentiation, and apoptosis.

Properties
Physical Appearance: A crystalline solid
Storage: Product stable at -20°C as supplied. Protect from prolonged exposure to light. For product expiry date, please contact techsupport@stemcell.com.
Solubility:
- Absolute ethanol ≤ 60 mM
- DMSO ≤ 60 mM
For example, to prepare a 10 mM stock solution in DMSO, resuspend 1 mg in 209 µL of DMSO.

Prepare stock solution fresh before use. Information regarding stability of small molecules in solution has rarely been reported, however, as a general guide we recommend storage in DMSO at -20°C. Aliquot into working volumes to avoid repeated freeze-thaw cycles. The effect of storage of stock solution on compound performance should be tested for each application.

Compound has low solubility in aqueous media. For use as a cell culture supplement, stock solution should be diluted into culture medium immediately before use. Avoid final DMSO concentration above 0.1% due to potential cell toxicity.
Published Applications

DIFFERENTIATION
- Promotes neuronal differentiation of neural progenitor cells derived from mouse embryonic stem (ES) cells (Abranches et al.; Aranha et al.).
- Promotes goblet cell differentiation in mouse intestine and cultured colonic organoids (Okamoto et al.; Yui et al.).
- Induces hair cell differentiation from inner ear stem cells in vitro, and transdifferentiation of supporting cells into hair cells in vivo (Bramhall et al.; Mizutari et al.).
- Causes premature differentiation of Her42-positive progenitors into neurons in zebrafish (Dirian et al.).

CANCER RESEARCH
- Induces apoptosis in primary and immortalized Karposi’s sarcoma cells (Curry et al.).

References

Related Small Molecules
For a complete list of small molecules available from STEMCELL Technologies, please visit our website at www.stemcell.com/smallmolecules or contact us at techsupport@stemcell.com.