Product Data Sheet

Product Name: JAG-1 (188-204), Jagged-1 (188-204), Notch Ligand
Catalog Number: AS-61298 (1 mg)  Lot Number: See label on vial
             CDDYYYGFGCNKFCRPR (1-letter code)
Molecular Weight: 2107.4
% Peak Area by HPLC: ≥ 95
Appearance: Lyophilized white powder

Peptide Reconstitution: Use distilled or higher quality water. Add water directly to the lyophilized peptide powder to obtain a final concentration of approximately 0.5 mg/mL to 1mg/mL or less. Gently vortex to mix. For peptides that have poor solubility in the suggested solvent, brief sonication may increase solubility in some cases.

Storage: Peptide is shipped at ambient temperature. Upon receipt, store lyophilized powder at –20°C or lower. Reconstituted peptide should be aliquoted into several freezer vials and stored at –20°C or lower. Do not freeze thaw.

Description: This peptide is a fragment of the JAG-1 protein. JAG-1 is Notch ligand, a peptide that is the most conspicuously expressed ligand in skin. JAG-1 induces epidermal maturation. Exposing submerged keratinocytes monolayers to JAG-1 with elevated calcium concentration produces stratification with loricrin expression and NF-kB activation. Ref: Nickoloff, B. et al. Cell Death Different. 9, 842 (2002).

Additional Information: Listed below are relevant information that may provide a guideline on how to use this product. End users will have to adapt to their own specific applications.

The DAPT (Sigma-Aldrich, St. Louis, MO, USA) and Jag-1 (AnaSpec, San Jose, CA, USA) were both dissolved in dimethyl sulfoxide (DMSO). Tracheas were excised sterilely and cultured in 1 : 1 mix of Dulbecco’s modified Eagle’s medium and Ham’s F-12 medium (DMEM/F12) containing 120 mg/mL 5-FU and 10% fetal bovine serum (FBS) for 12 h at 37 °C. Following removal of 5-FU, tracheas were cultured in DMEM/F12 containing 10% FBS with or without 5 μM DAPT (Sigma-Aldrich) or 40 μM Jag-1 peptide (AnaSpec). The tracheas cultured in DMEM/F12 containing DMSO alone were used as vehicle controls for the DAPT- or Jag-1-treated group—Ma, X-B. et al. Cell Proliferation 42, 15 (2009).

The 17-mer JAG-1 peptide (CDDYYYGFGCNKFCRPR), corresponding to amino acids 187-203 of human Jagged1 (accession number: NP_000205), was described previously and was shown to active notch signaling in keratinocytes and myeloid cell lines (36,37). The scrambled peptide (SC)-JAG-1 (RCGPDCFDNYGKYFC) was used as a negative control. Both peptides were synthesized by AnaSpec (San Jose, CA, USA). Peptides were dissolved in DMOS (50 mM), aliquoted, and stored at -20°C. Further dilutions to 100 μM were carried out at the time of the experiments—Sainson, R.C.A. et al. FASEB Journal 19, 1027 (2005).

Published Citations:


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