



ZYMO RESEARCH

The Beauty of Science is to Make Things Simple

PRODUCT INFORMATION

α-factor (alpha-factor)

- Description:** The α-factor pheromone arrests yeast in G₁ of the cell cycle. When yeast a and α cells encounter mating pheromones they induce genes necessary for mating, arrest the cell cycle in G₁ altering cell surface and nuclear determinates, and also cause morphological changes (see Figure 1 below).
- Concentration:** 10 mM in 0.1M sodium acetate pH 5.2, 240 µl, total 4 mg.
- Recommended Usage:** Simply thaw and use it directly for your experiments. α-Factor is functionally tested for its activity and is stable for multiple freeze-thaw cycles. We recommend using the α-factor at concentrations of ~5 µM (*bar1*Δ) to 100 µM (*BAR1*).
- Specifications:**
 - Sequence:** TRP-HIS-TRP-LEU-GLN-LEU-LYS-PRO-GLY-GLN-PRO-MET-TYR
 - Molecular Weight:** 1684
 - Activity Test:** Pass (G₁ arrest testing)
 - Purity:** Minimum 98% (HPLC)
- Shipping and Storage Conditions:** -20°C for short term storage (<6 months), -70°C for long term storage.

Assay Date: _____

Approved: _____

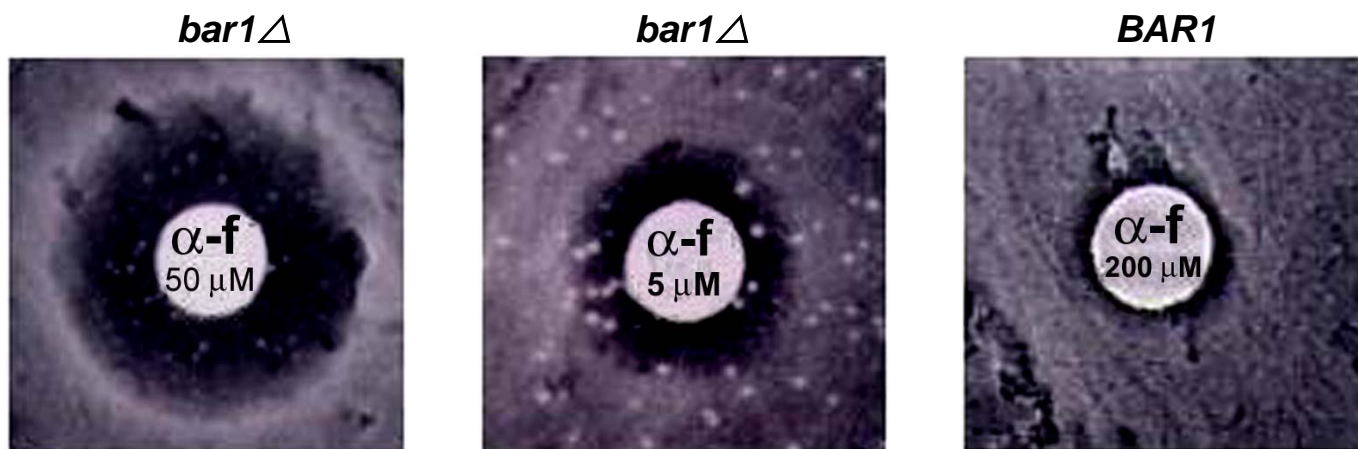


Figure 1. Activity test of α-Factor. α-Factor peptide pheromone (10 µl) was applied to sterile filters on a lawn of *MATa* cells, which were either wt for the *BAR1* (200µM, right) protease or *bar1* (50 µM, left; 5 µM, center). Sensitivity to the α-factor is evident as the zone of clearing (G₁ arrested cells). Cells that have the *BAR1* protease deletion are more sensitive to α-factor than *BAR1* protease positive wild strain which require ~20-50x more pheromone to arrest cells.

Products	Cat No	Size
α-Factor Mating Pheromone (Alpha-factor)	Y1001	240 µl
a-Factor Mating Pheromone (A-factor)	Y1004-500	500 µl



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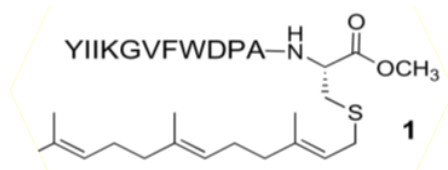
a-factor (A-factor)

Description: a-factor is one of the two mating pheromones in baking yeast. It is the “opposite” sex of mating pheromone α -Factor (alpha-factor). When yeast a and α cells encounter the opposite mating pheromones, they induce genes necessary for mating, arrest the cell cycle in G1, altering cell surface and nuclear determinates, and also cause morphological changes (see Figure 1 below).

Concentration: 1 mg/ml in methanol, 500 μ l, total 500 μ g.

Recommended Usage: a-Factor is functionally tested for its activity and is stable for multiple freeze-thaw cycles. We recommend using the a-factor at concentrations of 0.5ug/ml (BAR1 Δ). However, BAR1 strains have not been tested. To dilute the a-factor to work concentration, we recommend to use 0.5mg/ml BSA (bovine serum albumin) in water.

Specifications: a-Factor is a farnesylated dodecapeptide, see the structure below.



Molecular Weight: 1630
Activity Test: Pass (G1 arrest testing).
Purity: Minimum \geq 80 % (HPLC)

Shipping: Wet ice.

Storage Conditions: -20°C for short term storage (<6 months), below -70°C for long term storage.

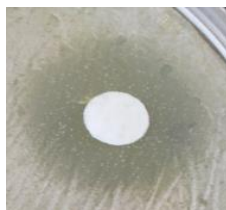


Figure 1. **Activity test of a-factor:** a-Factor, diluted with 0.5mg/ml BSA, was applied to sterile filters on a lawn of MAT α cells, which was bar1 Δ at 0.5ng/ μ l. Sensitivity to the a-factor is evident as the zone of clearing (G1arrested cells).

Products	Cat No	Size
a-Factor Mating Pheromone (A-factor)	Y1004-500	500 μ l
α -Factor Mating Pheromone (Alpha-factor)	Y1001	240 μ l

Ver. 1.2

ZYMO RESEARCH CORP.

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