Product Name: ACSF

**Chemical Properties**

<table>
<thead>
<tr>
<th>Product Name:</th>
<th>ACSF</th>
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</thead>
<tbody>
<tr>
<td>Cas No.:</td>
<td></td>
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<tr>
<td>M.Wt:</td>
<td>320.38</td>
</tr>
<tr>
<td>Formula:</td>
<td>C20H20N2O2</td>
</tr>
<tr>
<td>Chemical Name:</td>
<td></td>
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<tr>
<td>Canonical SMILES:</td>
<td></td>
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</tbody>
</table>

**Solubility:** Soluble to 5 mM in ethanol with gentle warming

**Storage:** Store at RT

**General tips:** For obtaining a higher solubility, please warm the tube at 37°C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

**Shopping Condition:**
- Evaluation sample solution: ship with blue ice
- All other available size: ship with RT, or blue ice upon request

**Biological Activity**

**Targets:** Others

**Pathways:** Reagents

**Description:**

ACSF is often used as replacement of CSF for perfusion of brain slices to preserve interneurons [1].

ACSF (artificial cerebrospinal fluid) is invented to reduce the incidence of cerebral edema and further suppress brain cell disorders. And ACSF is often used as an irrigation fluid or perfusion fluid in the field of neurosurgery, such as intracranial surgery, or when used as a replenishing fluid for lost cerebrospinal fluid. ACSF is also used to maintain pH balance and tissue oxygen delivery for research [2, 3].

ACSF is often used to maintain oxygen supply in the study of basic characteristics of neuronal...
function where acute in vitro brain slice models are required. When tested with neocortical mouse slices, carbogenated ACSF treatment could keep pH balance and tissue oxygen delivery; otherwise, seizure-like events were occurred in the slices with no-magnesium ACSF treatment [1]. In the study of targeted drugs for protect neuron, ACSF is often to treat the mice and worked as a control to calculate the drug efficiency [3].

It is also reported in the rat brain slice model, treated with ACSF, a replacement of human CSF, could powerfully boost spontaneous firing of CA1, CA3 and layer 5 pyramidal neurons [4].

Reference:

Caution

FOR RESEARCH PURPOSES ONLY.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

Specific storage and handling information for each product is indicated on the product datasheet. Most ApexBio products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Short-term storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.