**UniProt Summary**

**Primary Accession:** P11474

Binds to an ERR-alpha response element (ERRE) containing a single consensus half-site, 5'-TNAAGGTCA-3'. Can bind to the medium-chain acyl coenzyme A dehydrogenase (MCAD) response element NRRE-1 and may act as an important regulator of MCAD promoter. Binds to the C1 region of the lactoferin gene promoter. Requires dimerization and the coactivator, PGC-1A, for full activity. The ERRalpha/PGC1alpha complex is a regulator of energy metabolism. Induces the expression of PERM1 in the skeletal muscle. Binds DNA as a monomer or a homodimer. Interacts (via the AF2 domain) with coactivator PPARGC1A (via the L3 motif); the interaction greatly enhances transcriptional activity of genes involved in...

**Physical Characteristics**

- **Quantity:** 1 ml (culture supernatant) or 100ug at 1mg/ml (purified)
- **Format:** culture supernatant or purified material
- **Host/Isotype:** mouse IgG2a
- **Clonality:** monoclonal; ID R303.2.1B10
- **Formulation:** culture supernatant contains 0.02% NaN3. Purified material contains 30% glycerol, PBS and 0.02% NaN3

**UniProt Summary**

**Quantity:** monospecific for human ESRRA; see “Microarray Analysis” below

**Reactivity:** human; not tested for cross reactivity in other species

**Stability/Storage:** 12 months long term: -20°C; short term: 4°C; avoid freeze-thaw cycles; aliquot as required

**Handling Notes:** small volumes of antibody may occasionally become entrapped in the seal of the product vial during shipment and storage; briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container cap

**Tested Research Applications**

- Western Immunoblotting - Not recommended
- Immunoprecipitation - PASS by SOP

Antibody tested as purified IgG. Optimal dilution to be determined by user.

**Quality Assurance**

**Notes:**

1. Please refer to the SOP manual [click here](#) to for detailed explanation of the experimental setup and thresholds used to evaluate the results shown below.

2. Predicted MW of the target protein expressed in the western immunoblotting (WB) and immunoprecipitation (IP) experiment is 46.64kDa and the three fusion tags (venus, 3xFLAG, V5) adds another 38.7kDa to this protein. Therefore the protein is expected to migrate ~85.34kDa in a denatured SDS-PAGE gel.

3. See results below for any applicable cautionary notes.
**Product Description**

**Anti-Human ESRRA, monoclonal**

**Alternate Names:** Steroid hormone receptor ERR1

**Cat. No.** 14-089

*FOR RESEARCH USE ONLY NOT FOR USE IN HUMANS*

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**Quality Assurance (HuProt™ Array)**

<table>
<thead>
<tr>
<th>Rank</th>
<th>Protein</th>
<th>Z score</th>
<th>S score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>ESRRA</td>
<td>6.46</td>
<td>2.86</td>
</tr>
<tr>
<td>2</td>
<td>SATB1</td>
<td>3.6</td>
<td>0.38</td>
</tr>
<tr>
<td>3</td>
<td>ARID3A</td>
<td>3.22</td>
<td>0.61</td>
</tr>
</tbody>
</table>

**About Z and S Scores:** The z-score represents the strength of a signal that a mAb (in combination with a fluorescently-tagged anti-IgG secondary antibody) produces when binding to a particular protein on the HuProt™ array. Z-scores are described in units of standard deviations (SDs) above the mean value of all signals generated on that array. To be considered a definite binding event between a mAb and a protein target, the z-score must have a value of at least 2.5 (SDs above the mean). The s-score represents the relative target specificity of a mAb, and is the difference (also in units of SDs) between the z-score a mAb generates upon binding to one protein and the next highest z-score that the mAb generates against another protein. For example, if a mAb binds to protein X with an z-score of 43 and to protein Y with an z-score of 14, then the s-score for the binding of that mAb to protein X is equal to 29.
Quality Assurance (continued)

**IMMUNOPRECIPITATION - Predicted MW 85.34kDa**

![Graph showing anti-FLAG (ESRRA) IMmunoPrecipitation](image)

**Cautionary notes for IP and WB experiments:**

1. Target protein runs substantially heavier or lighter than expected

Tet-ON HEK cells were transfected with construct encoding ESRRA (NM_004451.3) with an N-terminal fusion of FLAG, YFP (Venus) and VS tags under a tet-inducible promoter. These cells were stimulated with 0, 50 or 1000 ng/ml doxycycline. Immunoprecipitation (IP) was carried out using 5ug of either IgG, CD1 mAb Anti-ESRRA (cloneID# R303.2.1B10) or 1 ug of FLAG-M2. Immunoblotting was performed using rabbit Anti-FLAG (1:1000, Cell Signaling #2368).
Quality Assurance (continued)

IP-MS

IP-MS performed by NCI. For protocol information click [here](#).

![Mass spectrum of R303.2.1B10 (anti-ESRRA)](image-url)