**BACKGROUND**

The transcription factor for the forkhead in rhabdomyosarcoma (FKHR), which is inhibited by insulin and IGF-1, enhances transcription. FKHR has been implicated in alveolar rhabdomyosarcoma, a soft tissue tumor wherein a chromosomal translocation [t(2;12)(q35;q14)] occurs between the FKHR and PAX3 genes, resulting in a novel chimeric protein with abnormal levels of expression. FKHR becomes phosphorylated at Ser 319, Ser 256 and Thr 24 by protein kinase B (PKB) in a phosphoinositide 3-kinase/Akt dependent pathway, resulting in the inactivation and subsequent nuclear exit of FKHR. In addition, FKHR becomes phosphorylated at Ser 329, also resulting in decreased FKHR activity and diminished nuclear FKHR concentration. However, phosphorylation of FKHR at Ser 329 is not mediated by a PI3-kinase dependent pathway, but by an alternate mechanism. Dual-specificity tyrosine-phosphorylated and regulated kinase 1A (DYRK1A), which co-localizes to the same region of the nucleus as FKHR, specifically phosphorylates FKHR at Ser 329 in rabbit skeletal muscle.

**REFERENCES**


**CHROMOSOMAL LOCATION**

Genetic locus: FOXD1A (human) mapping to 13q14.11; Foxo1a (mouse) mapping to 3 C.

**SOURCE**

p-FKHR (Thr 24) is available as either goat (sc-22161) or rabbit (sc-22161-R) polyclonal affinity purified antibody raised against a short amino acid sequence containing Thr 24 phosphorylated FKHR of human origin.

**STORAGE**

Store at 4°C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

**PRODUCT**

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-22161 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

**APPLICATIONS**

p-FKHR (Thr 24) is recommended for detection of Thr 24 phosphorylated FKHR of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

p-FKHR (Thr 24) is also recommended for detection of correspondingly phosphorylated FKHR in additional species, including canine, bovine, porcine and avian.

Suitable for use as control antibody for FKHR siRNA (h): sc-35382, FKHR siRNA (m): sc-35383, FKHR shRNA Plasmid (h): sc-35382-SH, FKHR shRNA Plasmid (m): sc-35383-SH, FKHR shRNA (h) Lentiviral Particles: sc-35382-V and FKHR shRNA (m) Lentiviral Particles: sc-35383-V.

Molecular Weight of p-FKHR: 80 kDa.

Positive Controls: NIH/3T3 + serum cell lysate: sc-2248.

**DATA**

![p-FKHR (Thr 24): sc-22161. Immunoperoxidase staining of formalin fixed, paraffin embedded human cerebellum tissue showing cytoplasmic staining of Purkinje cells.](image)

**SELECT PRODUCT CITATIONS**


**RESEARCH USE**

For research use only, not for use in diagnostic procedures.

**PROTOCOLS**

See our website at www.scbt.com or our catalog for detailed protocols and support products.