bs-11401R **[Primary Antibody]**

AKR1C3 Rabbit pAb

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DATASHEET

Host: Rabbit **Isotype:** IgG

Clonality: Polyclonal

GeneID: 8644 **SWISS:** P42330

Target: AKR1C3

Immunogen: KLH conjugated synthetic peptide derived from human AKR1C3: 161-270/323.

Purification: affinity purified by Protein A

Concentration: 1mg/ml

Storage: 0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
Shipped at 4°C. Store at -20°C for one year. Avoid repeated freeze/thaw cycles.

Background: DD3 is a unique enzyme that can specifically catalyze the dehydrogenation of trans-benzenedihydrodiol and trans-naphthalenedihydrodiol. Human liver contains isoforms of dihydrodiol dehydrogenase (DD1, DD2, DD3 and DD4), which belong to the aldo-oxo reductase/aldo-keto reductase (AKR) superfamily, have 20Alpha- or 3Alpha-hydroxysteroid dehydrogenase (HSD) activity. DD1 is also designated AKR1C1, DDH or DDH1 while DD2 also can be designated AKR1C2, dDD, BABP or DDH2. AKR1C3 and 3Alpha-HSD are alternate designations for DD3, while DD4 also can be called AKR1C4, CD or CHDR. DD1 and DD2 are 20Alpha-HSDs, whereas DD3 and DD4 are the 3Alpha-HSDs. The multiple human cytosolic dihydrodiol dehydrogenases are involved in the metabolism of xenobiotics, such as polycyclic aromatic hydrocarbons, pesticides and steroid hormones, and are responsible for the reduction of ketone-containing drugs by using NADH or NADPH as a cofactor. The 20Alpha-HSD catalyzes the reaction of progesterone to the inactive form 20Alpha-hydroxyprogesterone. The 3Alpha-HSD is a cytosolic, monomeric, NADPH-dependent oxidoreductase that reduces 3-keto-5-dihydrosteroids to their tetrahydro products. DD1 and DD2 are ubiquitously expressed, whereas DD4 mRNA is restricted to the liver.

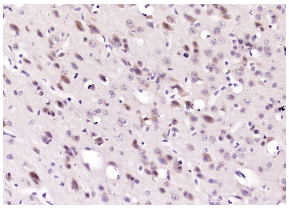
Applications: **IHC-P** (1:100-500)
IHC-F (1:100-500)
IF (1:100-500)

Reactivity: Rabbit (predicted: Human, Pig, Cow, Dog, Horse)

Predicted MW.: 36 kDa

Subcellular Location: Cytoplasm

VALIDATION IMAGES



Paraformaldehyde-fixed, paraffin embedded (Rabbit brain); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (AKR1C3) Polyclonal Antibody, Unconjugated (bs-11401R) at 1:200 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining.

SELECTED CITATIONS

- **[IF=6.8]** Zhang Hongrong. et al. Multi-omics analysis deciphers intercellular communication regulating oxidative stress to promote oral squamous cell carcinoma progression. NPJ PRECIS ONCOL. 2024 Nov;8(1):1-18 IF ;Human. 39572698