

## Product datasheet for **TP504727**

### Akr1a1 (NM\_021473) Mouse Recombinant Protein

#### Product data:

Product Type:	Recombinant Proteins
Description:	Purified recombinant protein of Mouse aldo-keto reductase family 1, member A1 (aldehyde reductase) (Akr1a1), with C-terminal MYC/DDK tag, expressed in HEK293T cells, 20ug
Species:	Mouse
Expression Host:	HEK293T
Expression cDNA Clone or AA Sequence:	>MR204727 representing NM_021473 <b>Red</b> =Cloning site <b>Green</b> =Tags(s)

MTASSVLLHTGQKMPLIGLGTWKSEPGQVKAALKHALSAGYRHIDCASVYGNETEIGEALKESVGSKAV  
PREELFVTSKLVNTKHHPEDVEPALRKTLDLQLEYLDLYLMHWPYAFERGDNPFKPNADGTVRYDSTHY  
KETWKALEVLVAKGLVKALGLSNFNSRQIDDVLSVASVRPAVLQVECHPYLAQNELIAHCHARGLEVTAY  
SPLGSSDRAWRHPDEPVLLEEPVVLALAEKHGRSPAQILLRWQVQRKVICIPKSINPSRILQNIQVDFDT  
FSPEEMKQLDALNKNWRYIVPMITVDGKRVRPRDAGHPLYPFNDPY

**TR**TRPLEQKLISEEDLAANDILDYKDDDDKV

Tag:	C-MYC/DDK
Predicted MW:	36.6 kDa
Concentration:	>0.05 µg/µL as determined by microplate BCA method
Purity:	> 80% as determined by SDS-PAGE and Coomassie blue staining
Buffer:	25 mM Tris-HCl, 100 mM glycine, pH 7.3, 10% glycerol
Note:	For testing in cell culture applications, please filter before use. Note that you may experience some loss of protein during the filtration process.
Storage:	Store at -80°C after receiving vials.
Stability:	Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles.
RefSeq:	<a href="#">NP_067448</a>
Locus ID:	58810
UniProt ID:	<a href="#">Q9III6</a> , <a href="#">Q540D7</a> , <a href="#">Q80XJ7</a>



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RefSeq Size: 1435

Cytogenetics: 4 D1

RefSeq ORF: 975

Synonyms: 2610201A18Rik; Akr1a4

**Summary:** Catalyzes the NADPH-dependent reduction of a wide variety of carbonyl-containing compounds to their corresponding alcohols. Displays enzymatic activity towards endogenous metabolites such as aromatic and aliphatic aldehydes, ketones, monosaccharides and bile acids, with a preference for negatively charged substrates, such as glucuronate and succinic semialdehyde (By similarity) (PubMed:22820017, PubMed:15769935, PubMed:20410296). Plays an important role in ascorbic acid biosynthesis by catalyzing the reduction of D-glucuronic acid and D-glucurono-gamma-lactone (PubMed:20410296, PubMed:15769935, PubMed:22820017). Functions as a detoxifying enzyme by reducing a range of toxic aldehydes. Reduces methylglyoxal and 3-deoxyglucosone, which are present at elevated levels under hyperglycemic conditions and are cytotoxic (By similarity). Involved in the detoxification of lipid-derived aldehydes like acrolein (By similarity). Plays a role in the activation of procarcinogens, such as polycyclic aromatic hydrocarbon trans-dihydrodiols, and in the metabolism of various xenobiotics and drugs (By similarity). Displays no reductase activity towards retinoids (By similarity).[UniProtKB/Swiss-Prot Function]